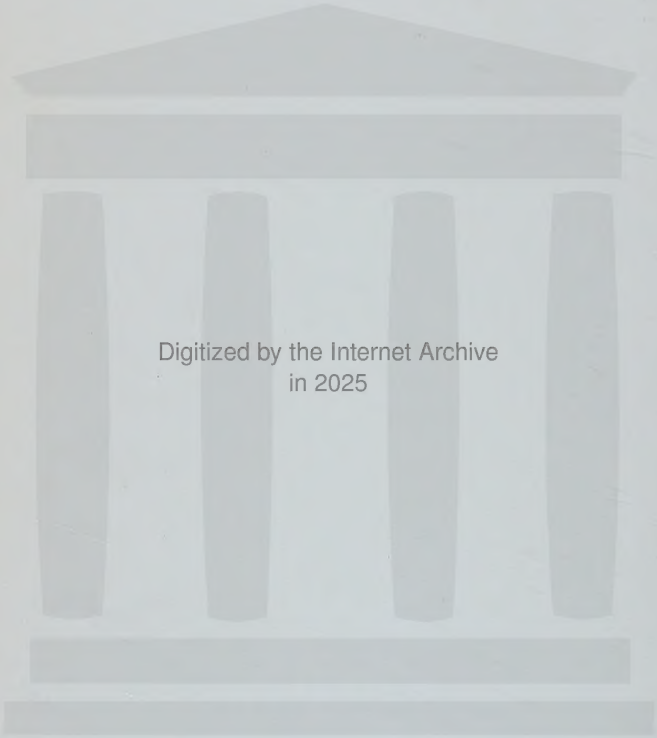
BIBLIOTECA


Digitized by the Internet Archive
in 2025

https://archive.org/details/palestine-exploration-quarterly_1869-1870

PALESTINE EXPLORATION FUND. Quarterly Statement. Complete from the commencement in 1869 to 1935, together with General Indexes for 1869–1910, 27 vols, 8vo, *half calf, rest in parts as issued,* £10 1869–1935

behind Assyriology.

Y/0/-

٩
٩٤٦

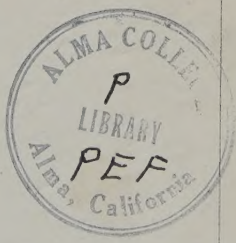
Palestine exploration quarterly

PALESTINE EXPLORATION FUND.

Patron—THE QUEEN.

Quarterly Statement.

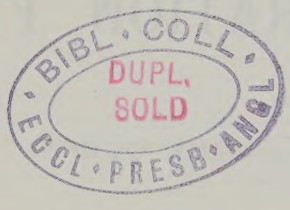
VOL. I.



LONDON:
PUBLISHED AT THE SOCIETY'S OFFICE, 9, PALL MALL EAST,
AND BY
MR. RICHARD BENTLEY, 8, NEW BURLINGTON STREET.

10349

1869-
70



CONTENTS OF VOL. I.

PAGE

Ai, The Site of. By Captain Wilson 123
Ain Jidy and the Dead Sea. By Captain Warren . . 143
Arabic Glossary 259

Characters and Marks at the South-East Angle. By Mr. E. Deutsch . . 33
Cœle-Syria, Temples of. By Captain Warren 183
Coleoptera (The) of Palestine. By Mr. G. R. Crotch 141
Convent of Sisters of Sion, Discovery at. By Captain Warren . . 370

Dosch (The Ceremony of the) at Baalbec. By Mr. W. Morrison, M.P. . 120

East of Jordan, Expedition to. By Captain Warren . . . 284
———, Heights of Places. By Captain Warren . . . 307
———, Positions of Places. By Captain Warren . . . 381
El Medyeh, Rock Tombs in. By Dr. Sandreczki 245
———, Note on 390

Gold in Palestine. Note by Rev. Greville J. Chester 89

Haram, The 368
Hermon, The Summit of. By Captain Warren 210

Itinerary 242

Jerash, Inscription from 388
Jerusalem, The Topography of 3
——— "Rob Roy" on the Works at 17

Kefr Kenna. By Rev. Dr. Zeller 71

Latitude and Longitude, Tables of 74
Lebanon, A Summer in. By Captain Warren 215

Meteorological Observations at Beyrout 103, 126
——— at Mount Lebanon 45
———, Results of 260
Masons' Marks. By Captain Warren 324
Moabite Stone, The 169, 281
Mounts Zion and Moriah, The Comparative Holiness of. By Captain Warren 76

PAGE

Narrative of Proceedings of the Fund 10

Palmer, Letters of Mr. E. H. 254, 311
Phœnician Inscription on Jar Handles 372
Pool of Bethesda. Note 331

Quarries, The Royal. By Mr. W. Simpson 373

Report of Executive Committee 48
——— Annual Meeting, June 24, 1869 90
——— ——— ——— May 16, 1870 331
Robinson's Arch. Note 46

Saida, Notes on a Visit to. By Captain Warren 136
Singular Custom, A. By Mr. G. Octavius Wray 89
Synagogues of Galilee. By Captain Wilson 37

Tell Salahiyeh, Excavations at 43
Temple of Herod. By Captain Warren 23
Tih, The Desert of 133
"Times," Extract from 16
Tombs in Palestine, Remains of. By Captain Wilson . . . 66
Tomb of Our Lord, The. Note 379

Weights, List of 330

Zoheleth, Stone of. By M. Clermont-Ganneau 251

Continued Letters of Captain Warren. Letters XXXV.—XLVII. *Quarterly* Nos. I., II., III., V., and VI.

THE

PALESTINE EXPLORATION FUND.

A SOCIETY FOR THE ACCURATE AND SYSTEMATIC INVESTIGATION OF THE ARCHÆOLOGY, TOPOGRAPHY, GEOLOGY AND PHYSICAL GEOGRAPHY, AND MANNERS AND CUSTOMS, OF THE HOLY LAND, FOR BIBLICAL ILLUSTRATION.

PATRON.

HER MAJESTY THE QUEEN.

Reports from Lieutenant Charles Warren, Royal Engineers, to George Grove, Esq., Hon. Secretary.

I.

JERUSALEM,
August 22nd, 1867.

MY DEAR SIR,

We completed our travels on the other side of Jordan by a thirty-six hours' ride into Jerusalem, where we arrived on Thursday last. I wrote to you from Ain Hemar, near es Salt, on 3rd inst., but on arriving at es Salt, on 13th, I found that my letter had been buried with the property of the man to whom it was entrusted. The inhabitants feared to trust their goods to the mercy of the approaching army. I will send a copy. I told you in that letter that I had heard of the march of troops against es Salt, and was hurrying on to Jerash, so as to complete the work before the war commenced in earnest. On arriving there I found that the troops were a day's march from us, and Sheikh Goblan was in a very nervous state. He has upwards of 200 unwiped-out murders on his hands; among others, that of a Turkish officer and six men, whose throats he cut while they slept. All day long he kept away from our camp, and stole down to us in the evening to keep a furtive watch. During the day we were attended by men of Suf. We found employment for three days After selecting sites for the photographs, I set to work measuring the public buildings and walls of the town, while the Rev. W. Bailey (who had joined us from es Salt) very kindly undertook the copying of many of the inscriptions, which were numerous. I believe that we have five or six which have not been seen before; at any rate, we had to get at them with pick and shovel. They are Greek. They will not be ready to go by this mail. On the third day I had notice that the troops were coming to Jerash, they having arrived at a place three hours' distant the night before; so, fearing they might

take a fancy to our mules, I sent the baggage on early in the morning, and we started ourselves in the afternoon. Two hours after we left, Jerash was occupied by 10,000 men. Sheikh Goblan was particularly anxious we should not sleep at Jerash that night, as it appears there was an arrangement among the Bedouins to harass the troops by musketry volleys during the darkness. The first day at Jerash was insufferably hot, the thermometer registering from morning to evening 105 to 107 Fahr. in the shade of the buildings. I made a general plan of the town, and detailed plans of the two temples, the two theatres, triumphal arch, and cathedral. Sixteen photographs were taken; the negatives are excellent. The bath had cracked again from the heat, and the photographing was attended with considerable difficulties. I could make nothing of the tombs spoken of by several writers, and I don't think there are any visible tombs among the Bedouins which have not been rifled. They care little for sacred places; and once when we passed a sacred or sainted tree, near Zerka, where the corn of the fellahin was buried, they plundered as much as they needed for their horses, the sheikh's chaplain absolving all the men from the sin, and taking the responsibility on himself.

On leaving Jerash we went westwards towards Reimûn. As we passed along we found all the villages deserted and empty at the approach of the soldiers. I was very curious to know where the people had gone to, and was told they had left the country. Passing Mount Haggart (?), I climbed up to the top to take some angles. Among the rocks and thick brushwood near the top we suddenly came upon the rusticated villagers, who were not at first quite satisfied with our appearance. They had their cooking utensils with them, and seemed very comfortable in their retirement. Mount Haggart is 5,000 feet above the level of the Dead Sea; it is a few feet higher than Jebel Osha, and 1,000 feet higher than Nebbeh (Nebo); I believe it to be Mount Gilead—and there are two villages close together in a gully to the north — Reimûn, on the top of a precipice, which I take to be Ramoth Gilead, and Sarchab, which is probably Mizpeh. Their close proximity may account for the name Ramoth-Mizpeh. After crossing the Zerka we went to Jebel Osha, where Sheikh Goblan appeared to breathe more freely. The first day was very foggy, but afterwards I was able to get a very good round of angles, fixing Jerash and Ain Hemar. None of the distant mountains to the north were visible, and it was difficult to distinguish Nebbeh. We stopped at es Salt one day, and visited the castle. The place was in great confusion, the soldiers were expected every hour, and the people were in a great state of apprehension as to how they would be treated. They wished to submit quietly, but the Adouans and Beni-Hassan Bedouins surrounded the town in great numbers and urged them to fight. The Christians feared for their property, if not for their lives; the Greeks had a promise that they should not be hurt, having a friend in the person of the Greek patriarch at Jerusalem, who is recognised by the Turkish Government; but the wretched members of the Anglican Church were in despair, having no one to appeal to. There are twenty-five families members of

our Established Church. They sent me a deputation to describe the difficult position they were in, and asked me to write a letter to the Governor-General of Syria, stating that they represented themselves as loyal subjects, and imploring his protection in case the town was given over to the mercy of the troops. This I did. Es Salt has since been given up to the Porte, and I hear that my letter was of much service in obtaining protection for the persons and property of the Anglicans.

During the afternoon we were at es Salt, the cry suddenly arose that the soldiers were coming. All the people appeared to turn out; and pell-mell we all hurried up to the top of the hill from whence the cry arose—the Bedouins numbering about 200 to 300 horse, and the men of Salt 400. Forming up as they reached the top of the hill, they waited for the approaching squadron, which proved to be a tribe of the Beni-Hassan who had come over from the enemy. When it was found that they were friends, a fantasia was got up in a natural theatre among the hills, and we witnessed different styles of Bedouin horsemanship. Not wishing to get embroiled in the little war, I pushed on for Jerusalem; but the question was how to get there. Sheikh Goblan is Commander-in-Chief of the Bedouin army, and did not much relish crossing the Jordan, there being 3,000 troops from Jerusalem encamped at Jericho; but also fearing he would lose his money if he did not go, he was greatly perplexed, and once or twice evidently thought it would be better to detain us. I kept him to his bargain, however, and told him he must take us to Jerusalem. On Wednesday we started from amongst the hills near Arak-el-Emir; visited Suwaimeh, near the Dead Sea; then returning by Aram, we started after sunset for the Jordan, arriving at 11 p.m. We were passed over in silence, and moved on to Hajla, where we fed our mules, starting about sunrise, and avoiding Jericho. The mules got to Jerusalem by Neby Musa.

I went down to the Dead Sea, and with some difficulty found the Ordnance Survey Bench Mark, which is in good preservation, but is covered up. The level of the sea is within a foot of what it was when Captain Wilson levelled there, but during the spring months it must have been 5 ft. 6 in. higher.

Goblan came up with us as far as Bethany, and hid himself at the back of the Mount of Olives, where I next day settled with him.

I don't think I can get you a sketch plan ready for this mail, showing the relative sites of the villages we passed through.

I think Aram is, without doubt, Haram, or Beth Haran (or Libias). Nimrah (Nimrin) is four and a-half miles to the north, and Suwaimeh (Beth Jesimoth ?) is four miles S.S.E., immediately under Nibbeh. Kaferein may be Abel Shittim. Aram and Kaferein have each an artificial mound attached, which guard the Wady Kaferein like two dogs.

I have surveyed on the other side of Jordan about 400 square miles, which, with 600 to S.W. of Jerusalem, and 250 in Jordan Valley, will make in all 1,250 square miles. I have still a good deal of work to do between this and Hebron to West; and also near Taiyibeh and Rimmon. I cannot get you the maps ready for at least six weeks. I have had no time

for office work since I have been out, and have to calculate the positions of about forty places astronomically.

I must devote the next two months entirely to office work.

The photographic stores—camera, plates, and everything else—have come to an end, and I have no more work for Corporal Phillips. As the work now wanted is interiors of buildings, and you do not mention having sent the magnesium lantern I asked you for some time ago, I therefore send Corporal Phillips home in charge of the negatives by the next mail. There are 185 in good preservation, and I hope you will see them in the same state about this day three weeks. Corporal Phillips has done excellent work since he has been out here. Most of the negatives are virgin subjects, and I think will be of immense interest in England.

I wish to draw your attention to two points :—1. I consider it most desirable that Corporal Phillips should print off a specimen set from these negatives as patterns, otherwise you will not get the copies as good as they might be. 2. A hundred sets sent out here would probably be sold very quickly. Visitors are always asking me why they cannot get our photographs here ; they are so much more valuable when bought in Jerusalem. Last winter a great number could have been sold. I could make arrangements for their sale here. In the meantime, will you send me out a set of the Ordnance Survey Photographs, and also of those taken last year by Captain Wilson ? I am continually wanting them out here ; and also I must have a set of those taken this year before I can make out my report. I don't know that there is in Jerusalem a single photograph taken last year or the year before ; and I know the Fund suffers by their absence. Will you send me out a prismatic compass as soon as you can ? The one I have at present is much worn, as I have had to use needles for the last six weeks. Accidents have happened to it several times, and nearly all the glass was broken. One of the photographic plates was cut up by means of a ruby I had picked up a few hours before. I fear some more serious accidents may happen to it before the other comes out.

I send you two sketches of the section through the Tyropœon Valley by this mail, also some detailed plans of the excavations and descriptions. I cannot send you accurate detailed plans of the works when going on. If you like to have them I will send them, but it only interferes with the work, and will confuse you. I find with regard to the wall parallel to the South Haram wall we were wrong ; it is only 15 ft. from it instead of 20 ft.

I send a leopard by Corporal Phillips, and also a small hawk—present the Zoological Gardens ; they will excite some interest in England if they arrive in safety. The leopard I got in Moab ; it is about a month old. If you will present them in the name of the Palestine Exploration Fund, it will take more than if I send them myself ; so Corporal Phillips has instructions to take them to you.

At the entrance to the Church of the Holy Sepulchre some steps have been cleared away, and a marble slab discovered—grave-stone—undated.

"Hic jacit Phillipus de Aubencin, cujus animus, resurrescat in pace. Amen."

There are some small characters near scratched on, of which I have tried to take a squeeze, but it is very faint. I have to thank Mr. Eaton for the squeeze paper ; he left all he had with me.

Very truly, yours,

CHARLES WARREN.

P.S.—Nearly all my time since my return has been taken up in prosecuting the Consulate Dragoman for swindling me. The case is proved, and I have obtained from Mr. Wood a verbal assurance that the man shall be suspended at the least ; otherwise, I had determined to leave the British Consulate and apply to some other when I wanted assistance.

EXCAVATIONS AT JERUSALEM—FEBRUARY TO JULY, 1867.

A.	Water Passages from Tank X.	Closed.
B.	Excavation at S.E. angle Haram Area	Do.
C.	Do. between Triple Gate and Aksa	Do.
D.	Well of Gihon (?)	Open.
E.	Church of England Cemetery	Do.
F.	Near Orphan Asylum	Closed.
G.	Cave between St. Stephen's and Damascus Gates	Do.
H. 1.	Damascus Gate	Do.
2.	Do. do.	Do.
3.	Do. do.	Do.
I. 1.	Shaft at Ophel	Do.
2.	Do. do.	Do.
J. 1.	Gallery between S.E. angle and Kedron	Do.
2.	Do. do. do.	Do.
3.	Shaft do. do.	Do.
K. 1.	Dung Gate	Do.
2.	Do.	Do.
3.	Do.	Do.
4.	Do.	Do.
5.	Do.	Work going on.
L.	Shaft at S.E. angle of Haram	Closed.
M.	Do. Kedron	Waiting for wood.
N.	Clearing rock face at Siloam	
O.	Muristan	Closed.
P. 1.	Wall of Ophel	Do.
2.	Do. do.	Do.
3.	Do. do.	Work going on.

A. *Water Passage from Tank X.*—These passages were first (?) discovered by M. de Saulcy. They are under the Triple Gate and are shown on the Ordnance Survey Plans.

The masonry blocking up the ends of these passages was knocked down, and they were found to communicate with Tank No. X. at different levels, and also with the vaulted chambers under the Haram Area. A passage was also discovered running apparently from the Great Sea, and also another winding passage or overflow channel from the Tank (see plan). During the examination of these passsges the work was stopped by the Pasha, and has not since been resumed. It would be most interesting to trace these passages.

It is a curious fact that the long passage at Adullam Khureitun, lately explored by Mr. Eaton, is similar in construction to this passage, the side steps being of the same dimensions.

B. C. These excavations will be remarked upon, together with those of L.

D. *Well of Gihon.*—This was the continuation of an excavation commenced by Captain Wilson, R.E., and followed up by Mr. Schiek. It is a natural perpendicular cleft in the rock, and was filled with red earth, stones, and pottery. After arriving at a depth of 135 ft. a storm partially filled the cleft with water, the clay swelling smashed in the shoring, and the work was rendered too dangerous to continue during the wet weather.

There are several traditions with regard to this shaft. It is supposed by some to be the site of a sealed fountain. I consider the results that are likely to accrue are too problematical to allow of my continuing this work at present, while money can be spent more profitably elsewhere.

E. *Church of England Cemetery* (sometimes called the Bishop's Cemetery).—This was the continuation of the laying bare of some steps cut in the solid rock, discovered when the cemetery was levelled. The rock here appears to have formed part of the ancient wall of Zion. These steps are considered by some to be those of the prophet Nehemiah, but the Rev. T. Barclay has shown me steps at Siloam which answer more nearly to the Biblical description.

The excavation reached a depth of 18 ft., and on arriving at the thirty-sixth step a landing was found, and a gallery was driven along it for 17 ft. without any results. This landing was probably the foot of the rock scarp, which must have presented to the enemy a perpendicular face of 29 ft. in height.

F. *Near Orphan Asylum.*—No results.

G. *Cave between St. Stephen's and Damascus Gates.*—No results.

H. 1, 2, *and* 3. *Excavation at Damascus Gate.*—1 and 2. Eastern side of road ; 3. On western side. They will be spoken of as one excavation.

It appears that in the 12th century the present Damascus Gate went by the name of St. Stephen's, and the only large buildings near it that are spoken of were the Church of St. Etienne and the Asnerie or Donkey House, which was used by the knights in the execution of one of their three old duties, viz., that of conducting pilgrims between Jerusalem and the sea-coast. It is also supposed that there was at one time near this gate a tower called " Maiden's Tower," which may have been made use of as the Asnerie. As it is probable that the Church was at some distance from the Gate, any massive walls found near to the latter would appear to

belong either to the ancient tower or to the Asnerie, always supposing that the present Damascus Gate stands on its former site. This Gate is at present built of two very different styles of masonry, the older portion of which is probably of the same age as the bottom *visible* portion of the S.E. angle, Haram Area. (See Captain Wilson's O. S. Report on this Gate.)

An excavation was commenced near the mouth of the cistern close to the wall at point A, east of road, where a solid wall was discovered with a relieving arch, blocked up with masonry. A passage was jumped 5 ft. into this wall, nearly as far as the foundations of the present wall, with no results. To the north of this was found a flight of steps, leading down to the tank. When these steps were used the tank was probably an open pool or sea. North of these steps was found a very ancient wall running east and west. The stones are bevelled and similar to those at the wailing-place, but appear not to be *in situ*, there being other stones in the wall of more recent date. Nearly opposite the Gate the wall suddenly stopped, and on digging round was found to be 10 ft. 6 in. in thickness, the north side being of a different style of masonry to the south, but of similar age. The foundations of this wall are 3 ft. below the roadway at the Damascus Gate, and it is improbable that the ground line there was ever lower than it is at present. Although this masonic wall is above the roadway leading through the Gate, an immense quantity of rubbish had to be cleared away, because it has been the custom to throw rubbish outside the Gate on either side, and consequently it has accumulated until it has formed two hills. With the roadway deep in the middle, the plan and elevation will best describe this wall, together with a photograph already sent. I should place the date of the building of this wall at an intermediate interval between those of the two styles of masonry at the Damascus Gate. Taking everything into consideration, I consider this wall was built by the Crusaders, and was destroyed when they were compelled to leave the Holy City. A stone with a Templar's Cross on it was found at the foot of the wall among the rubbish ; it had formed part of the wall. On the west side of the road the core of the wall was traced, but the hill of rubbish rose so suddenly, and the authorities got so nervous about the city wall, that I considered it prudent to close the excavation. It has sometimes struck me that there was a port on this site, with the pool in the centre, but I have not yet had time to investigate the matter.

I. *Shafts at Ophel, South of the Haram Area*—

These were sunk to find the depth of soil and to learn its nature.

No. 1.—Large cut stones found at depth of 25 ft., also the solid rock, in which was discovered the entrance to a watercourse, 1 ft. 9 in. high, and 5 ft. broad, with a gentle slope, probably for surface water, direction south-east, filled with red earth. After 21 ft. the channel became too small to work in. An interesting peculiarity with regard to this channel is that the soil appears to be virgin. No clue was found as to its use.

No. 2.—Trench, 12 ft. long, 4 ft. broad ; rock found at 15 ft. 6 in. No ruins.

J. *Galleries in Western face of Kedron Valley, below the Haram wall.*—Three separate attempts were made to find the rock at an intermediate point between the S E. angle and the Kedron. First a gallery was driven about 70 ft. below the surface. At the S.E. angle the substance met with was a dry loose shingle, lying at an angle of 30 degrees. The greatest difficulties were experienced in driving this gallery. The shingle, when it got a start, ran like water, and after driving the gallery 47 ft. such an immense cavity was formed above the frames, that, spite of its being filled up with brushwood and straw, the shingle eventually got the upper hand, and smashed in the frames, and I considered it dangerous to proceed with it.

No. 2.—An oblique gallery was tried at an angle of 60 deg., so as to be perpendicular to the layer of the shingle and also to the presumed lie of the rock. After driving 14 ft., the shingle commenced running rapidly, and destroyed the frames.

No. 3.—A perpendicular shaft was next attempted, and sunk about 14 ft. 6 in., with like results; the shingle (stone chippings, without a particle of earth) being in character almost a fluid.

K. *Dung Gate.*—Five shafts were sunk in a line from the centre of Robinson's Arch, perpendicular to the West Haram Wall.

1. 285 ft from Arch and near Sion Hill. Shaft sunk through common garden soil. At 21 ft. 6 in. a polished limestone slab was found, 6 ft. square, the covering to a sewer, full of very offensive matter: sewer 6 ft high, 3 ft. broad. Some bits of paper thrown in appeared in a few minutes outside the Dung Gate. Sewage kept moist by a *current of water* running through it, probably from the baths. Sewer apparently cut in solid rock This is likely to be the sewer through which the Fellahin entered in the time of Ibrahim Pacha.

2. Shaft 250 ft. from Arch came upon a masonry pier, 3 ft. by 4 ft., and in it the entrance to a circular cistern of more ancient date. Drove galleries north and west, and at 12 ft. 6 in. each way came upon similar piers, with fallen arches between: the whole appeared to have formed a colonnade or bazaar, running east and west. Stone, a sort of sandstone, similar to the ruins at Jiljul, Kakoon, and Suwaimeh, well dressed, flooring (much disturbed) of finely-dressed limestone flagging in square chesses parallel to the walls of the building.

Colonnade closed towards the north, built of rubble well rendered. Cistern had a quantity of camels' bones in it. It is circular, rendered in cement 2 ft. thick; roof slightly domed; rock 18 ft. from surface of ground.

3. Shaft 216 ft. from Arch. At 12 ft. found small arch in line with north wall of No. 2 shaft, and at 18 ft. came upon polished limestone pavement similar to No. 2. Also *débris* of cut stone 2 ft. by 1 ft. 1 in. below pavement. Rock at 32 ft. below surface, wall resting on it running north and south of squared dressed stones (*melekeh*).

4. Shaft 182 ft. from Arch. At 12 ft. found *débris* of building stones and part of marble column (white) one foot in diameter. These ruins appear to form part of colonnade found in Nos. 2 and 3. At 22 ft. a row

of stones and mouth of cistern in solid rock ; a piece of marble pavement found among rubbish in cistern, roof flat, sides square ; plaster or cement 2 ft. thick ; no entrance for water ; two man holes, 1 ft. 4 in. by 2 ft. 3 in., and 2 ft. 6 in. by 2 ft. Seven feet of rock at top of cistern ; rough chisel marks on it. This was probably a receptacle for grain used by the Jebusites or early Jews [?].

5. Shaft 82 ft. from Arch—just commenced. At 2 ft. struck small arch and vaulted passages, apparently for water. Sandstone. All the stones in these shafts in the line of the colonnade are cut in a similar style.

I conclude from what we have brought to light at present that there was formerly a ramp leading from near No. 1 shaft over Robinson's Arch, with an arched colonnade built on it, and that Robinson's Arch was similar to that discovered by Captain Wilson, extending over the Tyropœon Gulley, which was probably a ditch 45 ft. wide. I think the present No. 5 shaft will throw more light on the subject.

M. *Kedron.*—I anticipated your wishes with regard to the shaft in the Kedron Valley. I was so much struck with what I saw in the wadies of Surah, Dewaimeh, &c., that I came to the conclusion, independently of your article, that there must be water flowing in the Kedron Valley concealed from sight. I wished first to commence about 50 ft. east of the present Valley of the Kedron, so as to strike the natural valley in the rock, but the loose shingle prevented this, and it was considered better to follow the rock at the bottom of the present valley. A shaft was sunk 20 ft. deep to the rock, and then a gallery was driven west 37 ft., and soundings taken to the rock, which still falls to the west, and I think will do so for another 20 ft.

The work was discontinued for want of the frames I expected from England. I cannot get any more wood here for months ; there is not a scrap at Jerusalem or Jaffa, and I have sent by this mail to Malta for some fifty frames, which will keep us going until you forward some. The price is enormous here. I am sure that there will be very interesting results from the Kedron Valley Shaft, and I am most anxious to get on with it. A 2-in. board, 14 ft. long, costs 6s. 8d.

L. *South-east Angle of Haram Area.*—On first arrival at Jerusalem I bared the south wall in two places—at the south-east angle for 20 ft. in depth, and between the Triple Gate and Aksa for 16 ft. This work was suddenly stopped by the Pacha ; in both cases the stones were comparatively small compared with those visible above, and similar in every way to those at the Jews' Wailing Place. As any work near the Haram Area was stopped, I determined to find what the foundations of the wall were like, by sinking a shaft at a distance, and driving a gallery up to the wall. Commencing at 40 ft. south of the Haram Area south-east angle, a wall was struck, and a shaft driven down along to a depth of 53 ft. It had been my intention to drive straight for the south-east angle, but we were obliged to follow the direction of this wall, which abutted on the Haram wall 12 ft. 6 in. west of the angle ; the total length of gallery driven was therefore only 37 ft., and not 40 ft., as stated previously (see plan). At 15 ft. from the south wall, a wall was encountered

4 ft. in thickness, parallel to the south wall. Great difficulties were experienced in mining through this, as the stones were large. On striking the Haram wall, the stones were found to be similar to those bared above and to the Jews' Wailing Place; this course of stones was 4 ft. 6 in high. A shaft was then sunk and passed the next course, which had a draught at top and bottom of 6 in.; but the centre bulged out and was not dressed—4 ft. high; the next and bottom course, resting on the rock, was rough, with no draught; it was not intended to be seen; the rock was partially levelled for the resting of the stones. The wall running N. and S. and that mined through parallel to the south wall, are of similar age, and of *mezzeh*, very hard. For the first 30 ft. down the stones were bevelled, but after that they were very roughly dressed; they appear to have been exposed and worn by the atmosphere. The wall, 5 ft. thick, has been traced for 300 ft. from the Haram Area to the south. A tower has just been discovered—a face of 23 ft. 6 in. projecting about 8 ft. beyond the wall.

There are several very interesting points connected with the Haram Area which this discovery has raised. I find that the Single and Triple Gates are nearly (within 3 ft.) on the same level as the plane within, on which the bases of the piers rest; and this plane is 17 ft. above the earth at the south-east angle, and 80 ft. above the rock at that point. That this should be filled up solid seems improbable; and it seems more than likely that there is another system of older arches underneath those visible at present. All the masonry and piers and arches above the level of the gates are comparatively modern. I will try and solve this problem. My next work will be to sink a shaft opposite to the single gate, and examine the wall. Your questions, and those of M. de Saulcy, you must give me time to answer.

I send an elevation of the south-east angle that was bared, and plan of gallery. Great caution had to be taken while driving this gallery, the workmen at last refusing to go to work for fear of imprisonment.

II.

JERUSALEM,

2nd September, 1867.

MY DEAR SIR,

I send by Corporal Phillips (who left here on Friday week) an account of the excavations to be posted at Alexandria. I send now some sketches and plans which I had not then time to get ready. You will be very much interested in the Wall of Ophel, and I am now making arrangements to excavate between the tower and the furthest point to the S.W. exposed, where I think another tower may exist.

I am also excavating about 30 feet in front of the single gate to the south, and have arrived at what appears to be a passage leading north. I

commenced this excavation under the impression that there is likely to be a gateway under the single gate leading into the supposed lower vaults. As soon as we arrive at the rock we shall drive a gallery up to the Haram Wall.

I am also excavating near the Golden Gate, where a fellah says he found a tower, which may possibly be the remains of steps; but it is too far north for the remains of the Red-Heifer Bridge, which appears to have been a wooden bridge supported on pillars, just sufficient, I should imagine, to keep it off the ground, as it is impossible there could have been pillars a hundred feet high. I was quite sceptical about the existence of such a bridge until within the last fortnight, but the Mishna is so explicit about it that I have taken the matter up in earnest. I have already excavated to a depth of about 20 feet below the present east side of the Haram Area, where there are two stones bulging out—something like the springing of an arch—with no result.

The bridge I think must have commenced from a point 600 feet north of the south-east angle. The graves are in the way there, and I cannot dig.

Do send the gallery frames out as soon as possible, there is no wood to be got in Palestine. I have sent to Malta for fifty frames, but they will only help us on a little.

I told you that at the bottom of shaft, No. 1, Tyropœon Valley, we had come to a drain with a stream of water running through it. I am getting suspicious about this stream. Its flow is too constant to come from the baths, and it is not the waste from Solomon's pools: it must be from a spring at the top of the Tyropœon Valley. This will engage my attention.

I have made what I consider to be a very important discovery, viz.: an ancient aqueduct, south-east of the south-east corner of the Cœnaculum, and about 50 feet above the present aqueduct—I have no doubt the original aqueduct from Solomon's Pools to the Haram Area. We dug out the earth from a cut stone shaft 2 feet square, and at 16 feet was a channel running from the west to the north-east, precisely similar in construction to the passages under the Triple Gate. It varies very much in size; sometimes we could crawl on hands and knees, then we had to creep sideways, again we lay on our backs and wriggled along, but still it was always large enough for a man of ordinary dimensions. In parts built of masonry, in parts cut out of solid rock, it is generally of a semi-cylindrical shape; but in many parts it has the peculiar shoulders which I have only seen under the Triple Gateway, but which I told you in my last letter had been noticed by Mr. Eaton, in the channel leading towards Tekoah. To north-east we traced the channel for 250 feet, until we were stopped by a shaft which was filled with earth; to the west we traced it for 200 feet, till it was stopped in the same manner. In part of this passage we could stand upright, it being ten or twelve feet high, with the remains of two sets of stones for covering, as shown in M. Piazzi Smyth's work on the Great Pyramid; the stones at the sides being of great size—12 feet by 6. This channel cannot be so late as the Romans; it is evidently of most ancient construction. It is built in little spaces, as

if the work had been commenced at two or three points, and had not been directed properly. The plaster is still in good preservation. I shall have the passage cleared out, if possible, as far as the city walls. I presume it goes into the Haram, at a slightly higher level than the present aqueduct; if so, by following it we may arrive at some very interesting conclusions as to the original method of supplying the Temple with water.

This channel must have been of great consequence in olden times, both from the distance it is driven under ground, and from the well-cut shafts which lead to it. I think the question is to be hazarded whether the supply of Jerusalem was not obtained by this aqueduct, which is quite concealed from an enemy.

The work underground is now becoming too great for Sergeant Birtles both to superintend and to set the frames, and I am looking for some one who can manage the latter part, which is a very important job. Sergeant Birtles has an admirable method of getting work out of the fellaheen, and with him they do a very fair amount of labour per diem.

I have drawn three cheques since I have been back—£150 and £70– on account of trip to Jerash, and £50 when I sent Corporal Phillips home. With regard to what you say about my instructions, I had done the work laid down in them, except parts which I left for September, when I must go out for a week or two, and the plain above Jaffa and the desert of Judea would have been too hot. I have stood a good deal of heat, but I could not possibly work at Wady Zuweirah without water—in Moab there is lots of water, but in other parts it is very difficult to find it, and when I am working all day in the hot sun I require several gallons to keep up the perspiration. The Wilderness of Judea must be done in the winter; the extra expenses of the trip to Jerash were £145—about £4 10s. per diem—nearly half of what Tristram did it for, and £4 10s. per diem for feeding mules, &c.,—in all £270—and the photographs (50) I consider to value £500, while the upwards of 400 names I have written in Arabic are of considerable value also; fourteen astronomical stations and a map of 450 square miles, besides a box of specimen stones, and a book of dried flowers of Moab.

As I found it necessary to send Corporal Phillips home, I considered I ought to take all the photographs near at hand first. I very much doubt if anything can be done in Moab this winter. The Sultan's troops have taken Salt, and will go on to Kerak; but Ibrahim Pasha lost an army there, and it seems a matter of doubt whether these troops will take it this summer; in the meanwhile the country is in a disturbed state.

If the Society object to my journey to Jerash, I have no objection to taking the photographs and my labour off their hands for the price paid for the expedition, and pay, &c., but I consider what I did was for the interest of the Society, and so I know you would think, had I an opportunity of discussing the matter vis a vis.

Very truly, yours,

CHARLES WARREN.

P.S.—The bottles are from No. 6 Shaft. No bones found. I will send some more plans by Austrian post.

III.

[*Copy of Letter lost at es-Salt.*]

AIN HEMAR,
August 4th, 1867.

MY DEAR SIR,

On returning from the plain of Philistia, I found the works of excavation at a standstill, and as I had no more photography to do near the city, I considered it better to make a trip to Engedi, and then to Jerash, so as not to be waiting idle until I should hear from you. I consider that the heavy expenses of these trips will be covered in six months by the sale of photographs of places, of which such views have never been taken before. I will send a list of what have been taken already, and I hope that soon the ruins of Jerash will be added to the number. We left Jerusalem on 17th ult., under the guidance of Sheikh Goblan, and crossing the Jordan opposite Nimrin, came up to Nebbeh by Heshbon. I think there is little doubt about Nebbeh being the height of Nebo, as I came upon the ruins of an extensive fort and town about a mile west of Nebbeh, of the same name; and north of both, running west, is a deep wady, with a spring, named Ain Musa (Spring of Moses). On the other side of Nebbeh is another spring. I have also fixed the position of Maïn, which is generally described as being near Heshbon. I found it about ten miles to the south on Wady Zerka. I went about a mile further down the Zerka, but, being already on the ground of another tribe, Goblan refused to go on, promising to take us round to Callirhoe by the Dead Sea. I can hear nothing of the name Beth Jesimoth, but there is a ruin on the north-east of the Dead Sea called Swaimeh, where there is a hot spring. Higher up, near Keferein, we were shown a hot spring, temperature 96 deg.

After leaving Nebbeh we went to Naur [?], and after that for a week wandered among minor cities south of Amman, only a few miles distant. I have a list of altogether more than 150 names. We reached Amman on Saturday, 27th, stopping there four days. I made detail plans of the buildings, and a relative site plan. In photography we have been most successful, Corporal Phillips having produced some of the most perfect negatives I have ever seen. The hot, dry air has, however, spoilt all the photographic apparatus, and, with the exception of the lens, it will be of no use after this tour till it is repaired. The woodwork is all fallen to pieces, and the leather is like tinder. On return to Jerusalem I shall send Corporal Phillips home with the negatives, which I think will number close on 200. My great fear is now that some mishap may befall them before we get safe across the Jordan. These people are very queer. They

take the corporal in his tent for a magician practising the black art, and very little would induce them to stone him to death.

I suggest that these negatives should be sold at a higher rate than those taken on the other side, to cover the extra expenses—2s. to subscribers, and 2s. 6d. to the public; and I also think that the copyright should be obtained.

I found some inscriptions at Amman belonging to the triumphal columns, which appear to have stood on the citadel. I will give you what I can get from them, but I fear nothing can be made out. A portion appears in the photograph. I also found a sort of bas-relief of an animal —the back of a cow and head of a pig. It was so much worn that it could only be distinguished at a distance.

I am convinced that surveying is the first object east of the Jordan, because until the positions of the places are determined, it is difficult to know where one is going when out of the beaten track. I have now completed the survey of a small portion whose limits are lines between Keferein, Nebbeh, Main, Kurgeh [?], es Salt, Amman, Ain Hemar and Nimrin. I wish I could stay here and complete the survey up to the Hauran. I have just had an invitation from the Sheikh of Kerak to visit his country, but there are not enough points to photograph to make it pay for the surveying.

I shall, I hope, complete the survey of the plains on this side Jordan, but it is so disagreeably warm down there that I am not very sanguine; even up here it is more than comfortable during the day. For nine hours the thermometer ranges from 96 to 100; but at night it is cool. I am pushing on for Jerash now, as I find that the soldiers with the Kurds have got down to within a day's march of it, and I want to get my work done before the fighting commences. The tribes are gathering in to Wady Seir, [?] and matters look serious, as far as my visit to Jerash is concerned.

I send you the answer* which Dr. Barclay obtained for me from the Syrian Bishop with regard to the Deir Dubban inscription. I think myself that there is a concealed vault behind in the cave, and hope to make an excursion there shortly.

I have just received two letters from you. With regard to your remarks about the detail plans, it was not possible for me to send them without neglecting work in progress. The survey alone is as much as one man can do comfortably, and I have been nearly worked off my legs trying to keep all things square. When down in the plain I was, on an average, twelve hours in the saddle, besides observing at sunset and during the night; and although I do not take such long journeys here, still I can only keep up by working till after midnight—work all day and half the night in a semi-tropical climate, when continued for several months, is enough to knock up most men. I have also had to make all the arrangements for the excavations and read up the books of reference. I was not aware before that Captain Wilson sent any detail plans home until he went home himself. What I had intended to do was to devote August and September to these matters. I hope you will settle it all quickly with regard to the

* Not enclosed in the copy.—G. Grove.

Haram Area, as my hands are quite tied at present. I cannot promise any plans until I return to Jerusalem, when I will devote all my time to their preparation.

Very truly yours,

CHARLES WARREN.

I have received much assistance from the British residents here, especially from Dr. Brewer, Dr. Barclay, and Dr. Chaplin, which I should like you to mention if you will write again to the papers.

IV.

WORKS IN PROGRESS, 2ND SEPTEMBER, 1867.

In line of Robinson's Arch. No. 5 shaft.—After arriving at a depth of 24.6 ft., was abandoned, it being dangerous ; and another has been commenced 10 ft. north-west. A passage was found (floor at a depth of 14 ft.) with small communications leading north, west, and south, the last being a recess like a baker's oven. At second shaft, at depth of 9 ft., a tank has been found, 17 ft. deep, probably rock. Shaft 78 ft. from Haram Wall.

In line of Robinson's Arch. No. 6 shaft, 132 feet from Haram Wall.—This has been excavated to a depth of 26 ft., and a large stone has been found to-day, 3 ft. wide. It has not yet been examined—looks like a step.

Single Gateway, 37 ft. to south, shaft 22 ft. deep.—The top stones of a passage (?) are exposed. The shingle through which the shaft has been driven for the last 8 ft. runs like water.

Golden Gateway. Shaft about 100 ft. to east.—Searching for steps Found some large stones 3 ft. by 2 ft. by 2 ft.

Outside Dung Gate.—Commenced this morning searching for passage (traditional). Shaft is being sunk. No information ready.

Shaft discovered south-east of south-east angle of Cœnaculum, and 50 ft. above present aqueduct. Shaft 2 ft. square ; cut stone 16 ft. deep, opening into an ancient aqueduct, which probably led from Solomon's Pool to Temple Area ; traced 250 ft. to north-east, and 200 ft. to west ; passage cut in solid rock in parts, similar in all its details to the passages under the Triple Gate.

V.

PROGRESS OF WORK TO THURSDAY, 12TH SEPTEMBER, 1867.

JERUSALEM.

Tyropœon Valley, No. 6 *Shaft.*—Rock has been found at 30ft. from surface. The shaft is sunk through an old plastered chamber, 13ft. 6in. ; then passes a strong wall of hammer-dressed stones, running north and south, at 21ft. 3in. ; and at 26ft. 10in. the top of a massive wall is reached, running east and west. There are three courses of stones remaining. They rest on solid rock at 30ft. The rock is scarped away for 4ft., and the bottom is cut down in steps, the lowest point being 37ft. 6in. below

surface. Abutting on this wall is another, running north and south, supported by a buttress which rests on a flag 3in. thick. This flag covers a sort of passage cut in rock—stone generally melekeh.

No. 5.—The original shaft became unsafe, and was filled up; a new one being sunk 10ft. north, 10ft. west. At 9ft. the mouth of a shaft leading to a chamber was found, passing through crown of arch, semicircular arch to chamber; full of rubbish-stones; bottom 36½ft. below surface; plaster bottom broken through; and at 40ft. 9in. rock was found. This chamber is 18ft. long by 11ft. 6in.; apparently been used as a tank.

Single Gate in South Wall of Haram.—The stones which were considered to be the top of a passage are found to rest on pebbles. Their purpose appears to be doubtful. They are neatly arranged east and west, side by side. The under face is bevelled, and is the best. A wall found to east Waiting for frames to drive a gallery.

Aqueduct South of Cœnaculum.—The newly-discovered aqueduct has been traced to about 300ft. to north-east; it follows a most zigzag course; it disappears close to the present aqueduct. Passage to west being opened out.

South of Dung Gate.—Shaft to find passage; sunk 40ft.

Golden Gate.—Sunk 27ft. The excavation was commenced at a level 51ft. below the surface in front of the Golden Gate, to the east of it. A trench was first opened 26ft. long and 6ft. wide, and sunk 9ft. deep. On first opening the ground, seven or eight stones were uncovered, one of which measured 3ft. by 2ft. by 1ft. 6in. They were in good preservation, the chisel marks being visible. No more stones being found, a shaft was sunk at the northern end of the trench, 17ft. 9in. deep, giving a total depth of 27ft. from the surface.

Soil.—First 8ft., loam mixed with small shingle; from 8ft. to 13ft. in depth the shaft passed through stone packing 9in. to 12in. cube; from 13ft. to 18ft., good solid dark brown loam; from 18ft. to 22ft. 6in., stone packing again; 22ft. 6in. to 26ft. 9in., loam mixed with stones; at 27ft. the sides began to run, and from want of wood the shaft was abandoned.

Ophel.—These walls are at present being exposed, and are too complicated for a description to be given by this mail. There are two walls close together, which measure nearly 30ft. across. In front of this Ophel wall, in another place, has been found a road of concrete, 12ft. wide.

VI.

PROGRESS OF WORK TO 22ND SEPTEMBER, 1867.

JERUSALEM.

Tyropœon Valley. No. 5 *Shaft near Robinson's Arch*—Broke through eastern wall of cistern, 2ft. thick, found rock, and waiting for gallery frames.

Single Gate Shaft.—Filled up shaft, and preparing to sink another nearer the gate.

Wall of Ophel.—Tracing and exposing eastern or outer face of wall, well dressed squared stones, without bevel, 2ft. thick; traced wall for 47ft. from tower to north; sinking shaft 8ft. from south-east angle and examined junction of two walls, on outside; a detail plan of this will be ready next week.

Shaft outside Dung Gate.—Found rock at 47ft., a rude step cut in rock. Ancient aqueduct traced to near English School, the two aqueducts here cross, and we are at fault.

Shaft about 40ft. from South-west angle of Haram on South Wall.—Sunk 18ft. At 12ft. 6in. found a rough pavement. Stones of Haram Wall without bevel, similar to those above, about 3ft. 9in. each course, projecting 1in.

VII.

JERUSALEM, 1st *October*, 1867.

The three remaining days of last week I devoted to completing my sketch of country north of Taiyibeh to Mejdel. Cantering over to Beitîn on Wednesday evening, I started in the morning for the hill to north of Taiyibeh which you asked me to enquire about. There is no doubt about its being called Azûr; it is about the most conspicuous hill for some miles north of Neby-Samwil - it rises about 400ft. above the surrounding plain and the country people on all sides without exception know it well. I cannot find that it has been visited before. From the south it presents the appearance of having been cut down at top, but from the north it has a natural rounded appearance. The top is a flat surface about 300 yards by 100 yards, covered with vines, the fellahîn said they knew of no ruins or cisterns there, but at the same time remarked that they had never excavated. After I left I heard that there is at least one large cistern at top. I had a very good view and fixed in the towns of Yebrûd and Seiload and also the ruins of El Chauleh to north, and Hulleh* es Sultân, K-ech-Skara and Sâmeh to south-east. On the whole, I think that the hand of man has been busy altering the appearance of the top of the hill, but I did not see sufficient proof of its having been the site of a town. Passing to the east I went down by Kefr Mâlik to Wady Shâm and thence by the ruins of Sê'a and of Kulasôn and village of Mughaiyir to Daumeh, a village overlooking the plain of the Jordan. An irritating sirocco was blowing, but through the haze the ruins on top of Kŭrn Sŭrtabeh could plainly be seen, and the mouth of the Jordan and Neby 'Osha were just visible; to the west of the Kŭrn I could distinguish the Ains H'Affîr and Gureslî'a, which I had visited when at Fasâil, they are high among the hills and were surrounded by the Bedawin tents.

In the evening the villages of Daumeh sent some men to ask me to settle an alleged dispute between them and the people of Mejdel, respecting the ownership of the Wady Bursheh, which lies between them. I laid down the law that the southern half belonged to Daumeh,

* I have not been able to verify the majority of the names in this letter, or reduce them to Dr. Robinson's orthography.—G. GROVE.

and the northern to Mejdel. My dragoman a few minutes after heard some of them exclaiming in triumph that they had known it was all written down in our English books. It appears that they had had a dispute as to whether the Franks knew all about their country or not, and they had asked me the question to find out what I really did know.

I found prevalent here as well as elsewhere among the mountain villages the same ideas that exist in Philistia with regard to the coming of the Franks; it is deeply rooted in their minds that the Europeans shall come, drive them out, and take back the "land of their fathers" (*sic*); they all seem to look upon themselves as usurpers, only holding the land for a season, and are impressed with the idea that the time is very close at hand for them to be driven out. This, of course, makes them distrustful of the Europeans who write down the names of their villages. They know quite well the difference between the English and French nations, and look upon them as the two powers of the world. About Jerusalem, on the contrary, the Governments of France and Russia are looked up to as supreme, and the *prestige* of Great Britain is only kept up by the individual independence of the British residents, for whom the inhabitants have the greatest respect, the common binding to a bargain in the market being "on the word of an Englishman."

Before starting from Daumeh on Friday morning I was told by an old man that there was a place called Senna among the hills to the East. I was engaged at the time, and when I was ready to hear about it he was gone, I visited some of the tombs; they have been used for years as habitations for man and beast, and I could see nothing of interest in them. I heard of two large caves, one called Braûh; they are closed up. Passing to Mejdel, I could see Kûlasôn very clearly among the hills to S.W.; they say it is a large cave. North of Mejdel there were two places I wished to fix to complete my plans, Yanun and El Ifjim. I had to choose between missing them or Istuna, and I considered the latter of more importance, so, climbing up the hills to W. by Wady Nasîr, we came upon the village and ruins of Kefil, and near it to N. is Bîr Shêshem. From hence passing Jalûd, and the plains of Seilûn and Turmus Aya, we came upon Istûna, situated on the spur of the hill in the south-east corner of the latter plain. There are considerable remains of buildings, the most important being those of a casemate, stones 3ft. by 2ft. by 2ft., and to the north-east are a few remaining of a very ancient-looking building apparently last used as a reservoir, stones 6 to 10 feet long and 3ft. 9in. in breadth and thickness, about eight or ten are visible, forming two sides of a square; an irregular plinth surrounds them, with a check cut in it for water to run into a rock-cut cistern below, which has now caved in.

Istuna was visited and identified by Schultz as Alexandrium. From hence I passed by groves of young fig-trees through Turmus Aya and Sinjil, and still keeping down Wady Sîreh, came upon the ruins of Haliarta, on top of a hill E. of Jiljilia; then passing S. by Wady Carûn, we descended 1,000 feet to Wady Belât—thence ascended about the same height to Atâra, the north side of whose hills are terraced

and covered with fig and vine-trees. The view from the top is very extensive—Neby Samwîl, Gerizim, Jaffa, and a host of villages. I saw no signs of antiquity about the village.

On returning to Jerusalem, I passed the ruins of Turrafîn, Hammûdeh and Durka, on the same level as Atâra (about 2 300ft. above the sea)—and on the right the wadies of Muk-âfa and Rûmânie, on either side of road to Libneh; and thence passing by Jifna, I climbed the hill to its south, the ruin on top of which was called Kûteyeh and Areh-ûnta indifferently—thence through Bîreh towards Atâra (No. 2) north of which I found a high hill called Izbahîn (wanting an M to make it Mizpah). Jerusalem can be seen from this hill.

I forgot to state that I could hear nothing of Wady Mutyah when at Beitîn. The wady going by that name in V. de Velde's map is called there W. Jai, and then W. Mugheir, when it joins W. Asas from the north; it then changes to W. Sîk on passing the castle of that name situate S.E. of Rŭmmôn. I find as a general rule that wadies are called by the names of the villages that do or did exist on their banks—and on hearing of a change in name of a wady, I enquire indirectly for the ruin of that name, and have found several ruins in that manner. I should also on this principle consider that when a wady has many names, the country has been thickly populated, and *vice versâ*. It is from the frequent changes in the names that travellers differ so much in the names they give to the wadies. I conjecture that the name Mutyah occupies a short "reach" of the wady near the castle of Sîk. The wady which runs from Beitîn between Mukmas and Jeba is first called Towahîn, and joining Cussura and Egshwâr from the west becomes W. Shîban, then W. 'Ain, Sûweinît, and then W. Farah.

The nameless hill south of Tuleil-el-Ful, described as Nob by Porter, is called Sûmah.

VIII.

PROGRESS REPORT OF WORK TO 2ND OCTOBER, 1867.

Second Shaft at Single Gate in Haram Area.—14ft. south of Single Gate, sunk 30ft. 6in. without any results. For the first 20ft. the work was very difficult, the material sunk through being composed of rough stones and rubbish. The stones had to broken up in the shaft, and the concussion caused the loose shingle to run like water. The workmen were continually stopping until Sergeant Birtles could come and set them going again. From 20 to 30ft. in depth the soil was very firm, of a dark brown colour; stones and chippings are again appearing. The stones are generally rough cubes from 9in. to 18in., some are fragments of dressed stone, *melekeh*, and a few are of *mezzeh*; some pieces of marble have been found. Shaft still in progress.

Shaft near South-east Angle of Haram Area, five feet S.E.—Commenced for the purpose of baring the east face of Ophel wall and to look for gateway. At a depth of 4ft. from surface the east face of Wall of Ophel was found, the upper course of stones are 3ft. 9in. high, and appear to

have had a draught round them, but they are now much worn; the average height of other courses is 1ft. 9in.; the stones are squared and well dressed, and are mostly melekeh. A depth of 26ft. has been reached. The work has progressed fairly except when large stones have been met with. From 18ft. to 23ft. a kind of shingle was met with which made the work, for a time, very dangerous. It is proposed at a depth of 30ft. to drive a gallery up to south-east angle, and examine the junction of the two walls, then tamp it up again and proceed with the shaft to a depth of 45ft. and examine the junction of the two walls again. The Wall of Ophel at the top projects 1ft. 6in. beyond the visible east Haram Wall, and it will be interesting to know how the junction is effected. This Ophel Wall is now found to be at top 13ft. thick, and at least 15ft. thick at a depth of sixty feet.

Shaft to bare south Haram Wall about 40ft. from South-west Angle.—This shaft has been sunk 45ft. 6in. and rock has not been reached, so that the present Haram Wall at this point is at least 100 high. The wall is now exposed for the whole depth. At 12ft. 6in. from the surface a pavement was found, stones of *mezzeh* not regularly shaped, general size 12in. by 15in., well polished, probably from wear. Below the pavement a kind of concrete was sunk through, composed of stones, bricks, and mortar, for a depth of 16ft. From 28ft. 6in. to 33ft. 6in. loose stones and shingle were met with, and after that large stones were found 3ft. by 2ft. 6in. by 2ft., one of which had a draft round it; also a wall of rubble running north and south, and abutting on the Haram Wall, stones about 2ft. cube.

The courses of the Haram Wall exposed are as follows: the first three courses are similar to those above ground at this point, that is, they are great squared stones without bevels, in height about 3ft. 3in. The courses fourth to ninth appear to be similar to those at the Jews' Wailing Place, but the first five are very much worn, though the bevel can be distinguished, height 3ft. 9in. The face of the ninth course projects 3in beyond the draught. The tenth and remaining courses differ fro many seen above ground at the present day. The faces of the stones appear as when they were brought from the quarries, roughly dressed into three faces and projecting in some cases eighteen inches beyond their draughts, which are about 4in. to 6in. wide, and most beautifully worked. The stones are fitted together in the most marvellous manner, the joints being hardly discernible; a section is enclosed. This work has been stopped a day or two for want of wood.

At a depth of 22 ft. was found the signet stone of "Haggai, the son of Shebaniah"; characters engraved in Hebrew, of the transition period. [?]

Neby Daud.—The aqueduct discovered, after being traced for about 700 ft., is found to communicate with the present aqueduct near the English Cemetery. The builders of the present aqueduct, whether of the time of Herod or at a later period, appear to have made use of the more ancient aqueduct in places where cuttings in the rock would otherwise have to be made. The tunnel in the rock east of Mar Elias, by

which the lower aqueduct brings its water, has been examined, and parts of it are found to be of similar construction to that under the Triple Gate. It has been repaired at various periods. It is probable that a syphon may exist in the Valley of Hinnom similar to that described by Captain Wilson, near Rachel's Tomb.

Vineyard of the Palace.—This is an excavation to bare some caves above the Pool of Siloam; no results at present.

Muristan, or Hospital of S. John.—Three shafts were commenced last week in the continuation of the wall which is regarded by some as the ancient Second Wall of the City.

No. 1 shaft, 80 ft. west of the portion of this wall above ground; at 14 ft. masonry was found.

No. 2 shaft, 100 ft. west of No, 1; masonry found at 13 ft. 6 in. from surface.

No. 3 shaft, 26 ft. north of No. 2; masonry found at 8 ft.

The general impression obtained from view of the masonry is that there was a colonnade in the Muristan. Trenches are now being opened in order to make a plan of the existing work.

Another shaft has been commenced at the northern portion of the Muristan; no results at present.

Single Gate.—Shaft about ft. from the gate, sunk 34 ft. 6 in. to rock, whose surface was very rugged; shaft then filled up for 11 ft., and gallery commenced and now in progress to wall of Haram Area.

South-East Angle.—End of wall of Ophel about 5 ft. from angle; shaft sunk 40 ft. without finding any signs of gateway in Ophel wall; at 28 ft. from surface a gallery was driven to angle, and it was found that the Ophel wall simply abutted on the south wall of Haram Area; the Haram Wall projecting 6 in. each course on the eastern face.

Vineyard of the Palace.—Excavation to clear the face of some scarped rock which was traced for 30 ft. in length, and found to be 4 ft. high, but it was probably at one time far higher as extensive quarrying has taken place lately; two tanks or caves were found, respectively 7 ft. and 12 ft. in diameter, nearly circular.

Muristan.—Trench connecting 1 and 2 shafts was sunk to a depth of 14 ft.; two vaults or chambers were found, the tops being 13 ft. 6 in. and 14 ft. 3 in. from surface; the arches of these vaults are very rough, but the piers seem to be of older and better workmanship; the stones large and well dressed; the voussoirs of these arches appear to have been laid dry on the centrings, and then grouted in.

Muristan.—No. 4 shaft.—Sunk 28 ft. below surface, where a man-hole was found leading into a vault; on descending it proved to be the entrance to large tanks (dry), the bottoms of which are roughly estimated to be 53 ft. below the surface of the ground; the first tank entered ran north, 40 ft. long and 17 ft. wide, and in the north-west corner a flight of 25 steps; at 8 ft. from the north-east corner in east wall an entrance 6 ft. wide was found leading into ano her compartment running east, and being 68 ft. 6 in. long and 17 ft. wide, a little water lying at the east end of it; on the north side of this, about 25 ft. from the north-east

corner, an entrance was found leading north, but filled with hard mud, on clearing out which it was found to lead into another tank filled up with deposit, which is now being excavated out. The sides of this third tank are as fresh and impervious to water as if it had been newly constructed.

At the south-west corner of the tank first entered an entrance was found leading into another tank 16 ft. 6 in. and 6 ft. 6 in.

A plan will be sent as soon as it can conveniently be got ready.

These tanks appear to be by far the most extensive of any outside the Haram Area. I shall send to inform the Greek Patriarch of this treasure we have found in his ground as soon as we have completed our explorations there.

IX.

JERUSALEM, *October 2nd*, 1867.

MY DEAR SIR,

I received your letter and enclosures yesterday, and will attend to the suggestions.

I now send you a progress report of the works, which are getting on well. I only want gallery frames to make great way: opposition has ceased for a season, and we are prosecuting the work with all dispatch. I have now about twenty men turning up the ground at the Muristan, which has assumed the appearance of Chatham Lines after the commencement of the second parallel.

I have found a great change in the Effendis lately: they seem to be fast losing the apprehensions with which they were at first possessed, when they thought we were here for political reasons. They begin to appreciate our efforts now they see we do nothing to harm their religion; and the strict discipline to which the workmen are subject, and the prompt payments that are made, have invested our employment with a mysterious novelty.

We are getting really good work out of the men; they are gradually adopting our European notions, and a spirit of emulation has sprung up among them; instead of all wishing to be paid at the same rate, they now work hard to get on to the first class of pay. On Monday the measured work for the day showed six cubic yards per man dug up, and thrown out from an average depth of 3ft. 6in. During the whole summer we have worked English hours. Serjeant Birtles is indefatigable in his exertions; he has an amount of tact and discernment of character seldom to be met with, and I have always the satisfaction of knowing that what I leave to him will be done well. The work throughout has been of a dangerous nature, and we have hardly had an accident.

I sent you by the Austrian post the impression of a signet-stone found 22ft. below the surface, in a shaft near the south-west angle of the Haram Area.

I send you a sketch of the tesselated pavement of the South Apse of Holy Sepulchre; I will try to take a tracing, but it will not be very successful. I could see no signs of *marble* veneering on the walls, but there was the appearance of there having been a veneering or plaster of some kind on the stone: I have got a specimen of the rock at the Holy Sepulchre.

X.

PROGRESS OF WORKS TO 11TH OCTOBER, 1867.

Shaft near S.W. angle South Wall of Haram Area.—Depth excavated, to Thursday, 10th October, 76 ft.

On Friday, having arrived at a depth of 79 ft., the men were breaking up a stone at the bottom of the shaft. Suddenly the ground gave way, down went the stone and the hammer, the men barely saving themselves. They at once rushed up and told the serjeant they had found the bottomless pit. I went down to the spot and examined it, and, in order that you may have an idea of the extent of our work, I will give you a description of our descent.

The shaft mouth is on the south side of the Haram Wall, near the south-west angle, among the prickly pears ; beside it, to the east, lying against the Haram Wall, is a large mass of rubbish that has been brought up ; while over the mouth itself is a triangular gin with iron wheel attached, with guy for running up the excavated soil. Looking down the shaft, one sees that it is lined for the first 20 ft. with frames 4 ft. 6 in. in the clear ; further down, the Haram Wall and soil cut through is seen, and a man standing at what appears to be the bottom. An order is given to this man, who repeats it, and then, faintly, is heard a sepulchral voice answering as it were from another world. Reaching down to the man who is visible is a 34-ft. rope-ladder, and, on descending by it, one finds he is standing on a ledge which the ladder does not touch by four feet. This ledge is the top of a wall running north and south and abutting on the Haram Wall ; its east face just cuts the centre of the shaft, which has to be canted off about two feet towards the east, just where some large, loose stones jut out in the most disagreeable manner. Here five more frames have been fixed to keep these stones steady. On peering down from this ledge, one sees the Haram Wall with its projecting courses until they are lost in the darkness below, observing, also, at the same time, that two sides of the shaft are cut through the soil and are self-supporting. Now to descend this second drop the ladder is again required ; accordingly, having told the man at bottom to get under cover, it is lowered to the ledge, from whence it is found that it does not reach to the bottom by several feet. It is therefore lowered the required distance, and one has to reach it by climbing down hand over hand for about twelve feet. On passing along, one notes the marvellous joints of the Haram Wall stones, and also, probably, gets a few blows on skull and knuckles from falling pebbles. Just on reaching the bottom, one recollects there is still a pit of unknown depth to be explored, and cautiously straddles across it. Then can be seen that one course in the Haram Wall, near the bottom, is quite smooth all over, the stone being finely dressed, all other courses being only well dressed round the drafts ; one also sees two stout boards lying against the Haram Wall, under which the men retire whenever an accidental shower of stones renders their position dangerous. One is now at a depth of 79 ft. from the surface, and from here we commence the exploring of the "bottomless pit." After dropping a rope down, we found that it was only six feet deep,

though it looked black enough for anything. Climbing down, we found ourselves in a passage running south from the Haram Area, 4 ft. high by 2 ft. wide, and we explored this passage. It is of rough rubble masonr with flat stones at top similar to the aqueduct from Triple Gate, but not so carefully constructed. The floor and sides are very muddy, as if water gathers there during the rainy season.

It at once struck me that it was one of the overflow aqueducts from the Temple of Solomon, and that there might be a water conduit underneath; we scrambled along for a long way on our feet, our skulls and spines coming in unhappy contact with the passage roof; after about 200 ft. we found that the mud reached higher up, and we had to crawl by means of elbows and toes; gradually the passage got more and more filled up and our bodies could barely squeeze through, and there did not appear sufficient air to support us for any length of time, so that having advanced 400 ft., we commenced a difficult retrograde movement, having to get back half-way before we could turn our heads round. On arriving at the mouth of the passage underneath the shaft, we spent some time in examining the sides, but there is no appearance of its having come under the Haram Wall. It seems to start suddenly, and I can only suppose it to have been the examining-passage over an aqueduct coming from the Temple, and I am having the floor taken up to settle the question. This passage is on a level with the foundations of the Haram Wall, which are rough hewn stones—perhaps rock—I cannot tell yet. The bottom is the enormous distance of 85 ft. below the surface of the ground, and as far as I can see as yet, the wall at the south-west angle must be buried for 95 ft. under ground, so that it must have at one time have risen to the height of 180 ft. above the Tyropœon Gully. I consider it very unsafe sinking these shafts without sheathing them, but I have been obliged to do so for want of wood. In this shaft in particular, there is about 60 ft. unsheathed, and a loose stone from any part might stave a man's head in before he is aware of it. I think it running needlessly into danger, and I hope that with what you are sending from England, and what I am getting from Malta and Alexandria, I shall soon have enough to go on with in a business-like manner. The amount of wood wanted is very great; this shaft when sheeted would require 100 boards, 18 ft. long, and 9 in. by 1 in. We are also very much in want of English dockyard rope, and rope ladders, all the work here consisting of driving shafts of great depths, it is necessary to have many ladders; we have only two, and are often in great difficulties about it. It is all very well climbing hand over hand 35 ft. up a rope, when hanging in the air; but when it is in an unsheathed shaft, with the dangling bringing down the loose stones on the head, it is unsafe. The anxiety of mind caused lately, by having to keep the workmen going without adequate means for their protection, is more than I can put up willingly with any longer; *we must have plenty of money for the excavations or stop them altogether.*

I omitted to mention that the stones of the Haram Wall bared in this shaft are all the same *size* as those at the Jews' Wailing Place. I gave a description of the curious dressing of the centres of them last mail.

Virgin's Fount or Ain Um-ed-Deraj.—This was an excavation under the lowest step leading to the pool, in order to examine the communication by which the water enters. As the pool is usually occupied by water-carriers during the daylight, we went down about an hour after sunset on Friday, the 4th inst, and with three fellahîn of Silwân commenced removing the pebbly deposit from under the steps. The Silwân people, however, got wind of our proceedings, and came trooping down in a very excited state and requested us to begone. By dint of chaffing they eventually changed their tone and sent us coffee. After three hours' work I found that there would be more difficulty in opening the space under the steps than I had anticipated, and hearing that during this month there are few persons taking water from the pool, I ordered the work to be resumed in the morning.

It appears that the village was divided on our account, one cantankerous Sheikh taking it into his head that we had no business out of our own country, and in the morning our men found that he had effectually stopped our resuming the work by sending a bevy of damsels there to wash. His scant wardrobe, however, did not take long to beat up, and sending down the men again in the afternoon, the pool was found untenanted, and we resumed the work and continued it on Saturday, the village taking our working anywhere as a mat er of course, the Sheikh vowing vengeance on the men and threatening to get them placed on "the Road," which is just being commenced from here to Jaffa by forced labour. After removing the deposit under the steps for 4 ft., a hard substance was reached, either masonry or rock, and without the assistance of divers or letting the water off, it would be very difficult to continue the search in this direction any further. The other point of entrance of the water is a deep hole in the middle of the pool, at which nothing can be done. Finding our attempts thus abortive, I had the rock-cut passage to the Pool of Siloam examined, and Serjeant Birtles found two passages leading into it from the north-west, the further one being the largest, and being about fifty feet from the entrance to the pool. At this we commenced to open. It was difficult work, full of hard mud which had to be carried for 50 ft. through the water of the passage, and then taken up the steps leading to the pool. The men seldom have much more than their heads above water when removing the soil, and sometimes the water suddenly rises and there is danger of their being choked. The passage was cleared out 17 ft. to-day, and a small cave was arrived at, being the bottom of a deep shaft cut in the solid rock. It is difficult at present to form an opinion on the subject. We must erect a scaffolding to get to the top of the shaft, which appears at least 40 ft. in height. The magnesium wire has come at a very opportune time.

I find that just where Thrupp places the ancient Pool of Siloam, near the Fountain Gate, up in the town, there is a tank of enormous dimensions, which I have not yet been able to visit, and the aqueduct from Solomon's Pools runs within a few feet of it and could fill it. The place is called Burg al Kibryt on the Ordnance Survey plan 1:2500.

XI.

JERUSALEM, *October* 12*th*, 1867.

MY DEAR SIR,

I have received your letter from Paris; you will find several letters from me on your return to England.

I send you by this mail descriptions of three valuable discoveries we have made this week about Jerusalem, viz., at the Virgin's Fount, south-west angle of Haram Area, and Muristan. The work lately has taken up so much of my time that I have not been able to write an account of our visit to Engedi and Usdum. I have this week been down to Wady Kelt, and traced it up to the Fârah, but I must defer the account until next mail.

I wish to call your attention particularly to the deep shafts we have sunk lately. It is absolutely necessary, if this sort of work is to be continued, that the public should give with sufficient liberality to enable me to conduct the works in perfect safety to those who are employed continually under ground. The shaft at the south-west angle is a prodigious depth, and not half so safe as I should like.

With reference to the south wall of Haram Area, you see by the enclosed tracing that the south-west angle carries off the palm with regard to height. I was much astonished at the result of our labour, not expecting to find the Tyropœon Gallery more than 50ft. deep, and it must be, I think, upwards of a hundred The east side of this valley must break down in a very abrupt manner if the lowest part is west of the Haram Area. As for the passage we found running south, I do not know what to make of it; since writing the progress report the men have broken through the bottom of the passage and found solid rock. No wonder the poor Queen of Sheba's spirit failed her when she saw the stupendous ascent which must have led over the Tyropœon Gulley.

With reference to the quarrying of the large stones for the building of the Temple, an American gentleman from the Western States says he is convinced that he has seen quarries in two places where the stone has been "water-blasted."

I am glad to hear that the negatives have arrived safely: you will find one, of the Bridge at Ammau, taken from about the same spot as the picture by W. Tipping, Esq., of which an engraving is inserted in the "Dictionary of the Bible." An examination of the two fully bears out the character this gentleman has obtained for accuracy in his sketches of the Holy Land.

Very truly yours,

CHARLES WARREN.

XII.

PROGRESS OF WORK—ENDING 22ND OCTOBER, 1867.

Shaft at South-west Angle, 87½ *ft. deep.*—At 350 ft. along passage, a branch gallery from east was found, but it was impossible to clear out the deposit as this portion was only reached by crawling. The owner of the soil began to humbug about us being so long on his ground; I therefore have had the shaft filled up, much to his disgust, as he had begun to look upon it as an annuity.

The position of the passage has been fixed on the outside of the city walls, so that we can gain access at any time by sinking a shaft at Ophel. We are so much in want of wood that the few frames which will be liberated will come in very handy. This shaft will be closed to-day.

Virgin's Fount.—You may have been surprised last week when I described the finding the passage leading north as a discovery, after what Dr. Barclay, of the United States, says in his book about it; but I am prepared to show that in this instance he has misrepresented the facts of the case, and mistaking the main drain outside for a water conduit, has led his readers to believe that he has been up this conduit, which ends in a shaft over 40 ft. high, the passage to which was for 17 ft. closed with what appears to be the deposit of centuries. Next week I will send you a fuller account of this passage, as to-morrow I hope to be able to get the scaffolding up; it will be a tough job. Another small passage has been cleared out about 40 ft. from entrance from fount; it goes in for 9 ft. and suddenly terminates.

Single Gate.—In a former letter I stated that I believed there was another system of vaults under the present vaults, at south-east angle, and in a sketch at the same time I showed a point where I expected the entrance would be, under the Single Gate. I have been foiled once or twice in getting to this point, first the shaft failed, and when we had driven a second we had to wait till we could scrape together some gallery frames; finally we drove the gallery to the point I had indicated under the Single Gate, and on Wednesday, to our great delight, the hoped-for entrance was found. We were, however, both too ill to stay and explore it, and I had it covered up again. Yesterday we reopened it, and Sergeant Birtles set about getting out the *débris*. The entrance was into a passage which appeared to be blocked up—suddenly a crash, and the passage appeared clear and unencumbered, but after getting in Sergeant Birtles brought down another fall, and was blocked up in the passage without a light for two hours. It is quite clear now, the rubbish having settled at the bottom. I send you a plan which I made yesterday immediately it was open; you will see that the stones are of great size, one of them 15 ft. long, nearly all are bevelled and beautifully worked, but some of them are only hammer-dressed. The passage is 3 ft. wide, and is perpendicular to south wall of Haram Area, running between the piers which support the vaults above. After 60 ft. the roof stones disappear. On the east there is a passage blocked up, and also there is a second entrance above that by which we got in. The roof is composed of large stones, many of them levelled, and laid flat on the upper course of the passage wall. This upper course is 4 ft. in height, and at the bottom of it on each side is the remains of a small aqueduct jutting out from the wall, made of dark cement. The passage is probably from 12 ft. to 18 ft high, its roof is 20 ft. below the surface of ground in Haram Vaults, or about 60 feet below the level of Haram Area. At the point B on plan, there are indications of there having been a metal gate. A check, 10 in. cube, is cut in one of the roof stones, and there is the mark of abrasion on one of the stones, as if a metal door had swung against it; radius of swing about 13 in.

At present I have no clue as to the use of this passage.

Muristan.—Small arches are found all over the place—piers about 12 ft. to 14 ft. apart. They are probably Crusaders' work, as I understand the

Mahometans have never built here, the place having been cursed after they captured Jerusalem.

Detailed information in my next.

XIII.

JERUSALEM, 22nd Oct., 1867.

MY DEAR SIR,

I send you a description of our last discovery under the head of work in progress.

I had an attack of incipient fever last week after the post went out, and not being able to shake it quite off, I went for a three days' ride by Faghûr, &c., with Sergeant Birtles, who was also very unwell; we returned on Saturday quite recovered. I have made a list of the names of ruins, hills, &c., near Faghûr, and am getting it ready. I could hear nothing of the name Nubat Cohanim; Nuba, north-west of Hebron, appears to have no other name. With regard to the name Jeba ibn Kish, which you inquired about, the Jebâ south-west of Faghûr is called Jebâ beni Keisîyeh, because it belongs to the Keis faction, and to distinguish it from the Jeba of the Yemenîyeh. I have been trying to ascertain the boundaries of the land of Keis and Yemen. A Keisîyeh man told me that his faction wore red because they fought well, and that the Yemenîyeh wore white because they were afraid No doubt the other faction have equally good reasons for the difference in costume. These distinctions are now done away with. It appears that the road from Jerusalem to Jaffa was very nearly the boundary line, the Keisîyeh being to the south, and their boundary to the east being the Jerusalem and Hebron road; the Ta'amerah were Yemenîyeh.

I have been examining the lines of water conduit about Urtas and beyond. I find remains of the High Level Aqueduct on the Plain of Rephaim, to east of the Bethlehem road, extending for several hundred yards. Nothing could be seen anywhere of the third aqueduct, and I could find no trace of any outlet in its supposed direction in the passage leading from the Sealed Fountain to Solomon's Pools which we explored for nearly 500 ft. until we were close to the head of the upper pool. Here we were unable to proceed, the mud and water being up to our hips, and the accumulation of bats all driven into a small space being more than we could contend against, our candles being blown out by the nasty little animals, which got entangled in our hair and beards, and were most unpleasant in their antics. We left a mark on the walls and I intend re-examining the passage from the end close to the pools, where there is an opening and vault very like that under the nave of the "Sœurs de Sion." I have made a plan of the chambers and entrances for water at the Sealed Fountain. There is a very small flow at present, but near the Upper Pool of Solomon it is joined by a rush of water from a higher level, apparently from the aqueduct of Wady Byar, which, however, is dug a few hundred yards higher up. Probably there may be another sealed fountain to the south-east of that known at present. There is plenty of water at this point to keep the High Level Aqueduct going all the summer, should it ever be repaired, and that without interfering with the supply to Bethlehem and Jerusalem by the Low Level Conduit.

Your question with regard to the name Hazazon: we passed Wady Hazâza at one-third of distance from Frank Mountain to Engedi.

His Excellency the Military Pasha called upon me last week, and seemed very much interested in the Abyssinian expedition.

The little coney is getting on capitally. A very large one was obtained about a fortnight ago. At first it got on very well, but eventually I had to have it killed, as its feet were in a bad condition; it was very savage, and, when at bay, flew at one like a rat, and though naturalists may say its teeth are powerless, we have by painful experience proved that they are capable of meeting together in the human fingers. The fellahîn who caught them were bitten in several places, and the little animals bit through the wooden bars of their cages. It is a curious sight to see it snap savagely at a beanpod thrust at it, then suddenly finding it is good to eat, gobbles it up greedily. The one we have at present is about the size of a rabbit, but that which was killed was as big as a large cat. They certainly do not impress me with the idea of a "feeble folk."

With regard to my excursion to Wady Kelt, after passing Kahn Hazrûr (or Hudr), I passed about a mile along the Jericho road, and then turned north into the remains of what was a well-constructed Roman road, cut in the side of the rock, and leading to the Kelt, before reaching which we passed the remains of a fine aqueduct about 200 ft. above the stream, and in one place the masonry supporting it is about 80 ft. high. The road appeared to run alongside of the aqueduct on the south bank of the wady towards Jericho. There were the remains of several mills on the banks of the Kelt, the stream of which here was abundant. There was also the remains of an aqueduct on the northern bank. I followed these aqueducts up, the latter comes from Ain Kelt, about one mile higher up; then passing Ain Shriyeh, I found that the former comes from Ain Tuârah, which is also a large spring, about midway between Kelt and Fârah. I cannot see what becomes of the aqueducts from Fârah, they appear to have been for local purposes. North-east of Fârah is a high hill called Gobâ, which may have been one of the ancient Gibeahs, or Gibeons; it is about 2½ miles south-east of Gibâ.

Very truly yours,

CHARLES WARREN.

LIST OF PHOTOGRAPHS TAKEN IN 1867 BY SERGEANT PHILLIPS, UNDER THE ORDERS OF LIEUTENANT WARREN, R.E.*

165. Jerusalem :—Scarped Rock within City, east of Damascus Gate.
166. Jerusalem :—View of City from Damascus Gate, looking S.S.W.
167. Jerusalem :—Scarped Rock at Jeremiah's Cave, taken from City Wall.
168. Jerusalem :—Interior of Ruined Church (St. Peter), near St. Stephen's Gate.
169. Jerusalem :—Bottom of Wall at N.E. angle of City.
170. Jerusalem :—Minaret and Mosque of the Ascension, on Mount of Olives.
171. Jerusalem :—from Samaritan Pentateuch, in possession of Mrs. Ducat.
172. Jerusalem :—from Samaritan Pentateuch, in possession of Mrs. Ducat.
173. Jerusalem :—from Samaritan Pentateuch, in possession of Mrs. Ducat.
174. Jerusalem :—from Samaritan Pentateuch, in possession of Mrs. Ducat.
175. Jerusalem :—View of S.E. corner of the Haram, from the Jericho Road, on Mount of Olives.
176. Jerusalem :—View of City from Bethlehem Road : Neby Samwil in the extreme distance.
177. Wady Khureitun, with Entrance to Cavern (between the two blocks of stone on the right).
178. Jerusalem :—View from the Jaffa Road.
179. Jerusalem :—View of City from Damascus Gate, looking S.E.
180. Two Women grinding Corn.
181. Threshingfloor :—on Damascus Road.
182. Jerusalem :—Old Steps exposed at Damascus Gate (March 8, 1867).
183. Jerusalem, Group of Glass Bottles, Lamp, &c., found in tomb
184. Water Bottles of Goat-skin.
185. Group of Ta'amirah Bedouin, in Wady en-Nar (Kidron).
186. Ta'amirah Women, with cooking utensils.
187. 188. Ruined Aqueduct in Wilderness of Judah.
189. Convent at Mar Saba.
190. Convent at Mar Saba :—showing the Ravine.
191. Dead Sea :—Mountain range on N.W. side.

---

* These photographs are to be obtained from Messrs. Bartlett & Co., Fleet Street, price 1s. 6d. each; to Subscribers to the Fund, 1s.

192. Dead Sea :—Ain-Feshkhah.
193. View in Wilderness of Judah.
194. View in Wilderness of Judah.
195. View in Wilderness of Judah.
196. Frank Mountain (Jebel Fureidis), from the north.
197. View of Wilderness of Judah from the Frank Mountain, looking east: line of Moab Mountains in the distance.
198. Jerusalem :—Ancient Wall exposed at Damascus Gate.
199. Jerusalem :—View from Citadel, looking east, to Mount of Olives.
200. Jerusalem :—Trees in Garden of Armenian Convent.
201. Jerusalem :—Works at supposed Well on Jaffa Road.
202. Jerusalem :—Armenian Priests.
203. Jerusalem :—Armenian Priests.
204. Jerusalem :—Armenian Pilgrims.
205. Jerusalem :—Armenian Pilgrims.
206. Jerusalem :—Armenian Pilgrims.
207. Jerusalem :—Armenian Pilgrims.
208. Jerusalem :—the Natural Rock on Mount Moriah.
209. Kuruntul (Quarantania).
210. Jericho :—Head of Ain es Sultân.
211. Jericho :—Mound at Ain es Sultân.
212. Aqueduct across Wady en-Nawaimeh.
213. Aqueduct north of Wady en-Nawaimeh.
214. Reservoir and Mound south of Wady Kelt.
215. View in Wady Kelt.
216. Spring Head of Ain Dûk.
217. Nablus :—Group of Samaritans.
218. Nablus :—Group of Samaritans.
219. Nablus :—Group of Samaritans.
220. Nablus :—Samaritans at Prayer.
221. Nablus :—Samaritans at Prayer.
222. Nablus :—Samaritans at Prayer.
223. Nablus :—Group of Samaritans.
224. Nablus :—Group of Samaritans.
225. Nablus :—from Samaritan Pentateuch (book).
226. Nablus :—from Samaritan Pentateuch (book).
227. Nablus :—from Samaritan Pentateuch (roll).
228. Nablus :—from Samaritan Pentateuch (roll).
229. Nablus :—Lieutenant Warren, R.E., and Jakoob esh-Shellaby.
230. Jordan Valley :—View at Jisr Damieh, looking east.
231. Jordan Valley :—View shewing Terraces.
232. Jordan Valley :—Ruins at el-Aujeh.
233. Jordan Valley :—Dôm or Nubk (thorn) Tree, at el-Aujeh *(Zizyphus Spina Christi)*.
234. Ravine of Wady Kelt.
235. Wady Kelt, Wall in south side.
236. Jerusalem :—Armenian Patriarch.
237. Jerusalem :—Excavations at Damascus Gate.

238. Jerusalem :—Excavations at Damascus Gate.
239. Jerusalem :—View of Model of Church of the Sepulchre.
240. Jerusalem :—View of Model of Church of the Sepulchre.
241. Jerusalem :—Russian Pilgrims.
242. Jerusalem :—Russian Pilgrims.
243. Jerusalem :—Exterior Side of Holy Sepulchre.
244. Jerusalem :—Exterior of Entrance to the Holy Sepulchre.
245. Jerusalem :—Group of Polish Jews.
246. Jerusalem :—Group of Polish Jews.
247. Bedouin Horseman.
248. Pools of Solomon :—View of Lowest Pool.
249. Pools of Solomon :—General View.
250. "Rachel's Tomb."
251. View of Bethlehem (right) and the Frank Mountain (left), from the north.
252. Jerusalem :—Fellah Woman.
253. Jerusalem :—Arab Kawass.
254. Jerusalem :—Fellah Woman and Boy.
255. Gaza :—Aged Olive-tree.
256. Ashkelon :—View of Point, looking South.
257. Ashkelon :—Base of Tower overturned.
258. Ashkelon :—Ruins of old Wall, North side.
259. Ashkelon :—Ruins of old Wall, East side.
260. Ashkelon :—Gardens, from Eastern side.
261. Ashkelon :—Grove of Trees.
262. Ashdod :—Palm Trees (*Phœnix dactylifera*).
263. Ashdod :—Sarcophagus.
264. Ashdod :—Wely Irrigating machine and Camels.
265. Tell es-Safiyeh.
266. Tell es-Safiyeh :—Threshingfloor with Felahîn, and Oxen treading out Corn.
267. Yebneh (Jabneh) :—View of Fortress.
268. Jaffa :—Traditional House of Simon the Tanner.
269. Jaffa :—Cemetery and Gardens.
270. Jaffa :—House of British Consul.
271. Wady Surâr :—General View.
272. Wady Surâr :—Ruins on Hill to west.
273. Rafat.
274. Arak el-Menshiyeh.
275. Shuweikeh (Shocoh) :—Large Tree [?]
276. Dead Sea :—Tree of Sodom (*Calotropis procera*) at Spring of Ain-Jidi.
277. Dead Sea :—Valley of Ain-Jidi (Engedi), from the Spring.
278. Dead Sea :—View from the Spring of Ain-Jidi, looking S.E., towards Masada.
279. Dead Sea :—Tree (*Zizyphus jujube*), in Wady of Ain-Jidi.
280. Dead Sea :—View from Ain Jidi, looking across the Lake.
281. Dead Sea :—Springhead of Ain-Jidi.

282. Dead Sea :—Cavern at Ain-Jidi.
283. Dead Sea :—Mountain above Cavern at Ain-Jidi.
284. Masada :—View from Plain on S.E.
285. Masada :—View looking N. towards Ain-Jidi.
286. Masada :—Arch on Summit, North side.
287. Masada :—Arch on Summit, South side.
288. Masada :—Part of Ruins on Summit, showing Pigeon Holes
289. Masada :—View from Summit, looking south.
290. Masada :—View from Summit, looking north.
291. Kurmul (Carmel, in Judah) :—the Burj.
292. Ramet el-Khulil, "Abraham's House," near Hebron.
293. The Jordan, Ford at Wady Nawaimeh.
294. View of the Plain of the Jordan and Mountains of Moab, from Keferein.
295. Arak el-Emir :—Ruins from the East.
296. Arak el-Emir :—Ruins from S.W.
297. Arak el Emir :—Part of Ruins with sculptured animals.
298. Arak el Emir :—Ruins with sculptured animals.
299. Arak el Emir :—Entrance.
300. Heshbon :—Springhead.
301. Ain Nebbeh (Nebo) :—Spring and Ravine.
302. Nebbeh (Mt. Nebo) :—General View from the Spring, N.E.
303. Jebel Attârus :—General View from the North.
304. Es-Sûk :—Ruins and Columns.
305. Es-Suk :—Ruined Basement.
306. Es-Sûk :—Ruins.
307. El Jeswimeh (S.E. of Ammân) :—Ruined Building.
308. Ammân :—Ruin of Church.
309. Ammân :—Columns and Niche in Temple.
310. Ammân :—General View from N.E., with Stream, Bridge, &c.
311. Amman :—the Castle.
312. Amman :—Ruin of Square Building in the Upper Wady.
313. Amman :—Soffit of Arch with Sculpture.
314. Amman :—General View looking N.E.
315. Amman :—View in the Wady showing the Head of the Stream.
316. Amman :—Interior of Castle.
317. Amman :—Tower and Arches.
318. Amman :—Theatre with Columns.
319. Amman :—Bases of Columns in Citadel.
320. Amman :—Detail of Greek Church in Citadel.
321. Amman :—S.W. Angle of Citadel.
322. Amman :—Detail of Ornament in Cathedral.
323. Jerash :—View of Theatre from North.
324. Jerash :—View looking South.
325. Jerash :—View of Street from North End.
326. Jerash :—Entrance to Temple, and Ruins.
327. Jerash :—Gateway to Temple.
328. Jerash :—Columns of Temple of Sun.

329. Jerash :—Colums from South.
330. Jerash :—View in Theatre.
331. Jerash :—Entrance Gateway to City.
332. Jerash :—Roman Bridge and other Ruins.
333. Jerash :—Building, south of Forum.
334. Jerash :—Circle of Columns in Forum.
335. Jerash :—Inner Gateway of Temple.
336. Wady Zerka (the Jabbok) :—View from S. about 8 miles from Jordan.
337. View over the Plain of the Jordan, from Neby 'Osha.
338. Es-Salt :—View of Spring, with Cattle.
339. Es-Salt :—General View of Town.
340. Es-Salt :—General View of Town.
341. Group of Portraits :—Lieutenant Warren, Rev. Mr. Barclay, Corporal Phillips, Dr. Chaplin.
342. View of Deir Rabbah.
343. View of Deir Rabbah.

MEDITERRANEAN HOTEL, JERUSALEM,
October 28, 1867.

MY DEAR SIR,

I have been unable to explore passage in west wall of the Souterrain at "Sisters of Sion"; it is blocked up with masonry. I have, however, examined the hitherto unexplored passage cut in the rock at its southern end, and consider the results will be thought very interesting. Last week I looked into this passage, and found it to open out to a width of 4 ft., and to be full of sewage 5 ft. deep. I got some planks, and made a perilous voyage on the sewage for about 12 ft., and found myself in a magnificent passage cut in the rock 30 ft. high, and covered by large stones laid across horizontally. Seeing how desirable it would be to trace out this passage, I obtained three old doors, and went down there to-day with Sergeant Birtles; we laid them down on the surface of the sewage, and advanced along by lifting up the hindermost and throwing it in front of us. The general direction of the passage is due south; after 16 ft. it runs to west for 6 ft., and then pursues its original course. In some places the sewage was exceedingly moist and very offensive, and it was difficult to keep our balance whilst getting up the doors after they had sunk in the muck. After advancing 6 ft. we came to a dam built across the passage—ashlar—about 10 ft. high; the passage in continuation also containing sewage at the lower level of 6 ft. Everything had become so slippery that we had to exercise great caution in lowering ourselves down, lest an unlucky false step might cause a header into the murky liquid. After leaving this dam behind us some 50 ft. we found the sewage to be firmer at top, and after a few more feet we were enabled to walk on its surface with the aid of poles. The roof now began sloping down so that the height was considerably lessened, and on arriving at a little more than 200 ft. from the commencement we found our passage diminished to only 8 ft. in height, and blocked up at the end by masonry. The sketch will show more clearly the exact position of this passage: it is cut throughout in solid rock from top to bottom, and thus we have a fair section of the contour from the Serai to the Via Dolorosa.

It is evident that no ditch ever traversed the city across the line of this passage; and, therefore, the theory of a cutting from Birket Soraet to Strut El Wad is untenable, unless it be supposed to have been more northerly in the direction of the arched Souterrain, whose direction, S.S.E., appears inconsistent with such an arrangement. I cannot for a moment think that this passage was originally intended as a drain; it may have been a natural cleft, utilised by cutting, and this would account for its great height, which in some places is full 36 ft. above the surface of the sewage.

Dr. Chaplin suggests that it is the passage, "Strato's Tower," mentioned by Josephus as leading to Antonia.

I have examined the well at the northern end of the Souterrain, and am convinced that it is a spring of considerable capacity.

I will try and obtain a section of the rock down the Via Dolorosa, but cannot see my way at present.

I find that the rock below that portion of the Aksa set apart for women, is 15 ft. from the surface, and I think it improbable that there should be a continuation of the vaults between the triple and double gates.

Jerusalem is a necessitous place at present; to-day we can get no meat for love or money; yesterday no bread at any price, and all the week no charcoal; camel-drivers fear to come near the walls; at night you may see mysterious-looking dark bundles lying along the Jaffa road—they are the camel loads which have been brought up hastily and thrown down, the camels being got out of the way as soon as possible for fear of being pressed by the troops. To get mules you must guarantee their safe return to their stables, or the owners will have nothing to say to you. Baskets for removing earth are not to be had now in Jerusalem, the stores of them at Lydd were gutted by the authorities, and I have been obliged to send a fellah through the country foraging for some. All this is the effect of the war on the other side of Jordan, combined with a recent attempt at grafting European usages on Arab customs, which must fail.

The new road to Jaffa is going on most rapidly. Each village within a certain radius (at least 30 miles) has to furnish a contingent of men for so many days. It was estimated at five days each man, or a forfeit of 30 piastres (5s. 4d. English), but some of my men have already paid 50 piastres and worked on Sundays as well, so that in one village at least the pressure must be very heavy.

Portions of the road are told off to each village, and the men are marched off there by the soldiers as if they were prisoners, and are ordered to bring their own food and *water*. Some of them come all the way from Hebron.

Seeing how energetic the Turkish Government is in the construction of this road, it would be more satisfactory did we know that it is being made on sound principles, but as such is not the case, it seems hard indeed that the poor peasants should be forced to spend their time and money on a work which must certainly come to grief during the first heavy rains. There is no doubt but that the road has got on in the most astonishing manner, and is fair to view on the outside, but a system of flat stones thrown about, with earth patted over them with the hands, and then pressed down by rollers drawn by little children, can have little power of resisting the efforts of the winter's rain. It is said the road will be opened for traffic on the 1st of January.

Moab is still in a disturbed state. After Es Salt was taken by the Turkish troops, they proceeded to build there a citadel, and also to repair block-houses at Nimrîn and Wady Hesbân, for which purpose men were pressed from the villages about Jerusalem, and all the mules and camels which could be laid hands on were taken up for carrying stones over there.

The pressing of mules into the service of this country is a strange proceeding. The head muleteer must send his men with them, and if he wants the animals to live he must provide money for their food, the rations served out being about 3lbs. of corn per diem. After they have been employed for a

month or six weeks, they are dismissed with a present of ten piastres for the head muleteer, so that it may be said that the mules have been paid for.

After the buildings were completed, the troops left for Damascus, a small garrison of soldiers remaining at Es Salt, and some Beni Hassan Bedawin at Nimrîn and Hesbân. Hardly had the troops left when Sheikh Diab, of the Adouans, surprised the block-houses and drove off and killed many of the Beni Hassan and got back a great deal of corn. Part of the Adouans' land had been given up to the Beni Hassan, but Diab fell upon them and plundered their tents, &c. He was prevailed upon to give them back their property, but after he had done so he heard that this tribe were going to retaliate on him, and learning the exact time they would leave their camp, he hastily changed his, and then when they had gone out against him, he in his turn again plundered their tents, and drove them under the walls of Es Salt, where they are at present protected by the soldiery. When the Mushîr sent to know why Diab had driven out and killed the Beni Hassan, he was told not to interfere in the intestine quarrels of the Bedawins.

It is said that Diab has got back more corn than what he paid over to the Government, which must have been a large quantity, as he had not paid up previously for four years.

Goblan gave himself up to the Turkish authorities after he left me, and tied his khafia round his neck (a sign of submission); no doubt it was part of the policy of his tribe that some should give themselves up, but it was an awkward business for him, as a Turk's word is of no value, and he could hardly have known what would be done with him; he has been allowed to return to his tribe; he was very anxious to be taken in some manner that I should be responsible for his safe custody (this was when at Jerusalem); and I had to keep a sharp look-out that he did not get me into the business, and told him plainly that if he got taken through his own carelessness I should not consider myself in any way responsible. He was evidently in a most unhappy frame of mind, one moment wishing to give himself up, the next thinking it would be better to fly the country altogether.

He sent me word a few days ago that if I wanted to go anywhere that he would like to be my escort through his country; I had also a hint that travellers had better not take soldier escorts into Gilead and Moab, as the Bedawin would consider it an infringement of their rights. I also calculate that it would be more expensive to take soldiers, and they are no use as guides, and are apt to be insolent and idle, while the Bedawin, if managed with tact, are very decent sort of fellows.

1*st November.*—We now hear that Diab has been taken prisoner at last, and conveyed to Damascus, and that the country is quiet. I fear that it will be some time before travelling is the same there as it is over here.

WORKS IN PROGRESS.

Virgin's Fountain.—By last mail I told you we had cleared out the accumulation of centuries from the passage we discovered leading from the main aqueduct, and had arrived at a shaft leading upwards for more than 40 ft.; the sides being smooth, cut out of solid rock.

To-day, 24th October, having managed to obtain a small quantity of wood after infinite trouble, we went down to the Fountain shortly after sunrise; we had some 12 ft. battens 2 ft. square, but were obliged to cut them in half, as 6 ft. lengths could only be got into the passage; the water was unusually low, and we managed to crawl through on our bare knees without wetting our upper clothing very much, which was fortunate, as we had the whole day before us. After passing through the pool we had to crawl 50 ft., and then came upon the new passage, which is 17 ft. long, opening into the shaft. The bottom of this shaft is (now that the deposit is removed) lower by about 3 ft. than the bottom of the aqueduct, and was evidently filled from the Virgin's Fountain. The length of the shaft averages 6 ft., and width 4 ft. We had a carpenter with us, but he was very slow and quite unused to rough-and-ready style of work, and the labour of getting up the scaffolding devolved on Sergeant Birtles and myself; the fellahîn bringing in the wood and handing it to us; once, while they were bringing in some frames, the spring suddenly rose and they were awkwardly placed for a few minutes, being nearly suffocated.

By jamming the boards against the sides of the shaft we succeeded in getting up 20 ft., when we commenced the first landing, cutting a check in the rock for the frames to rest on, and made a good firm job of it. Then, with four uprights resting on this, we commenced a second landing. On lighting a piece of magnesium wire at this point, we could see 20 ft. above us, a piece of loose masonry impending directly over our heads; and as several loose pieces had been found at the bottom, it occurred to both of us that our position was critical. Without speaking of it, we eyed each other ominously, and wished we were a little higher up. The second landing found us 27 ft. above the bottom of the shaft. The formation of the third was very difficult; and, on getting nearly to the loose piece of masonry, we found it more dangerously placed than we had imagined, and weighing about 8 cwt. So we arranged it that the third landing should be a few inches under this loose mass, so as to break its fall and give us a chance. This third landing was 38 ft. above the bottom of the shaft. We floored it with triple boards. It was ticklish work, as an incautious blow would have detached the mass; and I doubt if our work would have stood the strain. About 6 ft. above landing No. 3, the shaft opened out to west into a great cavern, there being a sloping ascent up at an angle of 45 degs., covered with loose stones about a foot cube. Having hastily made a little ladder, I went up; and very cautious I had to be. The stones seemed all longing to be off; and one starting would have sent the mass rolling, and me with it, on top of the Sergeant, all to form a mash at the bottom of the shaft. After ascending about 30 ft, I got on to a landing, and the Seregant followed. We found the cave at this point to be about 20 ft., and to go S.W. and N.W. The former appeared inaccessible; the latter we followed, and at 15 ft. higher came on a level plateau. From this is a passage 8 ft. wide and 3 ft. to 4 ft. high, roof cut in form of a depressed arch, out of rock. We followed it for 40 ft., and came to a rough masonry wall across the passage, with hole just large enough to creep through. On the other side the passage rose at an angle of 45 degs., the roof being at the same angle and still cut in the same manner as before. The space between the roof and the bank is about

2ft. There are toe-holes cut in the hard soil, so that, by pressing the back against the roof, it is easy to ascend. 50 ft. up this found us at the top, where was another rough masonry wall to block up the passage; and on getting through we found ourselves in a vaulted chamber 9 ft. wide, running about N.W. for 20 ft.; arch of well-cut, squared stone, semicircular; crown about 20 ft. above us; below us was a deep pit. We had now to go back for ropes; but, on getting near the shaft, found it impossible to get down with safety. Luckily the Sergeant had a faja on, which, torn up in four pieces, just reached down to the ladder; and we hauled up the rope and took it to the vaulted chamber and descended into the pit about 20 ft. deep, and then into a smaller one about 8 ft. deeper, where we found the appearance of a passage blocked up. Coming back we explored another little passage with no results.

The sides of the horizontal portion of the passage are lined with piles of loose stones, apparently ready to be thrown down the shaft; on these we found three glass lamps of curious construction, at intervals, as if to light up the passage to the wall or shaft; also in the vaulted chamber we found a little pile of charcoal as if for cooking, one of these lamps, a cooking dish glazed inside, for heating food, and a brig for water. Evidently this had been used as a refuge. Two other brigs (perfect), of red pottery, we found in the passage; and also overhanging the shaft an iron ring, by which a rope might have been attached for hauling up water. Having now explored this passage, there only remained that going S.W. To get to it, it was necessary to go down half way to the shaft and then up again for about 15 ft. I had a rope slung round me and started off; the use of the rope was questionable, as it nearly pulled me back in climbing up. On getting into the passage we found the roof (of rock) had given way, and nothing definite could be seen but pieces of dry walls built up here and there. In coming down, part of a dry wall toppled over into my lap as I was sitting on the edge of the drop. Sergeant Birtles was 6 ft. lower down and narrowly escaped them; they were each about a foot cube; three of them came on me, but I managed to hitch them back into the passage. We now heard to our surprise that the sun had set, so getting together our delf, we made all haste down. On coming out, great was the commotion among the people of Siloam, who wanted to have a share in the treasure, and would not believe we had only got *empty* brigs. We got into town some time after dark.

28*th Oct.*—On going up the scaffold next day a stone over 2 ft. long was found lying on the top landing—it had fallen during the night. The men are now working at the blocked up passage in the vaulted chamber. Two more brigs have been found. A plan and section is sent.

Virgin's Fountain.—With regard to a supposed passage or aqueduct leading from Sion or the Sakhrah to the Virgin's Fountain, the statements of Dr. Barclay, in the "City of the Great King," and of Sig. Pierotti, are copied into the work of Lewin on the "Siege of Jerusalem," and into the articles on Jerusalem and Siloam in Smith's "Dictionary of the Bible."

These statements are not correct, and have very much misled later writers. I will only speak with reference to Dr. Barclay's work, since if Sig. Pierotti's has the same character for truth and accuracy in England as it has in Jerusalem, it is not necessary for me to say a word on the subject.

There are three parallel passages in the "City of the Great King," bearing on the Virgin's Fountain, at pages 309, 518, and 523.

Page 309, Dr. Barclay states:—"In exploring the subterranean channel conveying the water from the Virgin's Fount to Siloam, I discovered a similar channel entering from the north a few yards from its commencement, and on tracing it up near the Mugrabin Gate, where it became so choked," &c. Again he states, with reference to the same channel, page 518:—"On closely examining a passage turning north, at a distance of 49 ft. from the upper extremity, it was found to be the termination of the channel leading across Ophel from Mount Sion, and explored as far as a point near the present Mugrabin Gate."

In both these passages he distinctly states that the passage was traced from the Virgin's Fount to Mugrabin Gate; and these passages have been made use of by later writers.

Now turn to page 523, and read what he really did do. "I then observed a large opening entering the rock-hewn channel, just below the pool, which, though once supplying a tributary quite copious—if we may judge from its size—is now dry. Being found too much choked with tesseræ and rubbish to be penetrated far, I carefully noted its position and bearing, and on searching for it above, soon *identified it on the exterior*, where it assumed an upward direction toward the temple, and entering through a breach, traversed it for nearly a thousand feet."

The plain English of this is, that finding a subterranean passage branching off from the main aqueduct about 40 ft. below the surface of the *rock*, and not being able to get into it, he went on the hill of Ophel outside and *identified* as one and the same passage the main drain of the town, which is built of masonry, and generally only a few feet below the surface of the made earth.

The aqueduct which the two first passages in the book would lead most readers to believe that it was explored by Dr. Barclay, has been filled with deposit (not tessaræ) for years, and was only supposed to be what it is—an aqueduct; but contrary to Dr. Barclay's statement, it is now found not to be a tributary to the fountain, but a conduit for water from the Virgin's Pool to the shaft, which the iron ring at the top would lead one to suppose was the ancient draw-well of Ophel.

The fact of the newly found aqueduct being nearly in a line with the first fifty feet of the old one, gives the idea that this may originally have been the means of providing Ophel with water, and that the remainder of the duct to the present Pool of Siloam may have been an afterthought.

Whatever new theories this discovery may give rise to, there is this certainty—that the inhabitants of Ophel had within their wall the means of procuring living water to almost any extent.

Very truly yours,

CHARLES WARREN.

SUBSCRIPTIONS RECEIVED SINCE 1st SEPT., 1867.

	£	s.	d.
J. Robison Wright, Esq.	5	5	0
The Right Honourable the Speaker	25	0	0
H. S. Bicknell, Esq. (2nd donation)	5	5	0
Stephen A. Hankey, Esq.	10	0	0
W. Mackinnon, Esq.	10	0	0
J. Noble, Esq. (to Geological Fund)	20	0	0
Charles H. Bousfield, Esq.	5	0	0
Edward D. Stone, Esq.	2	2	0
Rev. W. Plummer	10	0	0
Rev. J. A. Bastow (annually)	0	10	6
S. W. Silver, Esq.	5	5	0
Major Speid	2	0	0
Rev. Henry Harkness	0	2	6
Rev. Harry Smith	1	1	0
Rev. W. Bilton	2	0	0
R. Clayton Brown, jun., Esq.	5	0	0
Hon. and Venerable Archdeacon of Leighlin	1	0	0
Rev. J. C. Harrison	1	1	0
C. H. Crompton Roberts, Esq. (to Geological Fund)	50	0	0
G. Gilbert Scott, Esq., R.A. (2nd donation)	25	0	0
John H. Barneby Lutley, Esq.	10	0	0
Subscriptions at Cambridge, per W. Aldis Wright, Esq.	100	0	0
John E. Millais, Esq., R.A.	1	0	0
John Murray, Esq. (2nd donation)	25	0	0
Rev. Dr. Temple, Rugby (2nd donation)	20	0	0
R. D. Darbishire, Esq., B.A., F.G.S.	10	0	0
Charles Pease, Esq (2nd donation)	5	0	0
Rev. J. Murray Holland	5	0	0
Viscountess Strangford	5	0	0
Rev. James Cohen	1	1	0
Miss Grove	1	0	0
Rev. Isaac Taylor	1	1	0
F. F. Tuckett, Esq. (2nd donation)	5	0	0
R. K. Bowley, Esq.	5	5	0
Charles H. Fox, Esq.	2	2	0
Rev. Z. Nash	5	0	0
T. B. Sprague, Esq.	5	0	0
John Edward Gray, Esq.	5	0	0
Edward Nuth, Esq.	1	1	0
Commander T. M. Norman, R.N.	1	0	0
Rev. Jonathan Cape (2nd donation)	2	2	0
James Fergusson, Esq. (2nd donation)	10	10	0
Mrs. J. Somes	5	5	0
C. T. Newton, Esq.	5	0	0
Society of Antiquaries	10	0	0

"RESOLUTION PASSED AT A COUNCIL OF THE SOCIETY OF ANTIQUARIES OF LONDON, NOV. 19, 1867.

"The Council of this Society learns with regret that the action of the Palestine Exploration Committee is crippled for want of funds; a want so urgent, that the operations now in progress in the Holy Land are in risk of being suspended for lack of proper support and sympathy at home. The Council believes the work to be one of the greatest pith and moment, and worthy of the warmest and most liberal support. The undying interest of the land explored, the sound and scientific basis on which the exploration is conducted, the vast importance of the results obtained, and the still greater value—as there is every reason to believe—of the discoveries which are on the eve of being made, and which want of funds will throw back into obscurity: all these considerations seem to the Council to commend this great work to the generous sympathy of all. The Council hereby authorise the treasurer to pay to the Palestine Exploration Fund the sum of £50.

(By order) .. "C. KNIGHT WATSON, *Secretary*."

For particulars respecting the PALESTINE EXPLORATION FUND, apply to the Honorary Secretary GEORGE GROVE, Esq., Sydenham, S.E.

JERUSALEM,
November 12th, 1867.

MY DEAR SIR,

I send you by this mail tracings of junction of the Wall of Ophel with south-east angle of Haram Area—sections through passages in continuation of Gate of Mahomet—sections through the Haram Area to show position of rock and plans of tank No. 11 and the passages west of Birket Israil.

There is a point somewhat north of the Mosque of Omar Platform, where there may probably be a deep ditch filled up with earth; if not, it must be a natural valley, as the rock is entirely wanting at surface.

The section through tank No. 11 is very interesting, as it shows that the arched passage from Triple Gate cannot be more than 3 ft. above the top of it, and that the west wall of the Triple Gate passage lies on top of this tank.

I send you a list of the tanks, with a note of the distance of rock from surface in each case. I have examined the passages west of the Birket Israil. The southern terminates abruptly, at 134 ft., in a masonry wall; the northern opens, at 118 ft., into small arched passage, running north and south, of modern construction, which appears to have been built to enable the rubbish to be thrown down. I am exposing the wall to the west, but at present there appear no signs of a continuation of the passage. This exploration was a very nasty piece of work, as the passage is now used as a sewer, and is choked up to the crown of the arch. In one place we both stuck for about ten minutes, not being able to get backwards or forwards.

I don't know now of any likely place that we have not examined, and feel quite content to see the rain pouring down, which it has been doing since yesterday evening.

I have been engaged for the last fortnight in examining tanks all over the place, but have found none, except Nos. 11 and 22, in the Haram Area, which are interesting.

The cistern at the Damascus Gate is the only one which had much water in it—5 ft.

We are now going on with the gallery under the Cedron, and have met with some very large stones, which have to be broken up.

At the Virgin's Fount we have sunk a shaft down to the upper arched chamber, lately discovered, and now can get in the passage from the Hill of Ophel. We can find no signs at present of a continuation of the passage.

Outside the Dung Gate a shaft is being sunk to open up the passage discovered at the south-west angle of Haram Area.

The gallery in shaft No. 6, Tyropœon Valley, is in progress.

Arrangements are being made to sink a shaft under the *southern* part of Wilson's arch along Haram Wall. The northern part of the arch has been built up, and is used for a tank.

Walls are found in every direction at the Muristan, but nothing definite. I am now sinking to find rock if possible.

Yours very truly,
CHARLES WARREN.

TANKS OF HARAM AREA.

(*See Captain Wilson's Notes, page* 43.)

No. 1. Rock, 12 ft. from surface of Mosque platform, 2,423 ft. above Mediterranean.

No. 2. Rock, 6 ft. from surface, 2,429 ft.

No. 3. Rock, 9 ft. from surface, 2,426 ft. The channel cut in rock was explored November 11, 1867. It runs north and south, and receives the surface water from smaller ducts, which run east and west.

No. 4. Rock, 11 ft. from surface, 2,424 ft.

No. 5. At North-west entrance, rock, 10 ft. from surface of platform, 2,425 ft.; at south-east entrance, 8 ft. below surface of area, 2,408 ft.

No. 6. Rock, 5 ft. 6 in. from surface, 2,410 ft. 6 in.

No. 7. Rock, 5 ft. below surface, 2,411 ft.

No. 8. Rock, generally 5 ft. below surface, 2,411 ft.

No. 9.

No. 10. Rock, 31 ft. from surface, 2,385 ft.

No. 11. Rock, 19 ft. from surface. 2,399 ft.

No. 18. Rock, 4 it. from surface, 2,314 ft.

The following tanks are now numbered for the first time:—

No 21. South of Birket Israil, 21 ft. deep, 24 ft. by 12 ft. Of masonry; no rock visible.

No. 22. Near Bab en Nazir, a large cistern, with roof cut in rock, domed; large circular openings into it from surface, and a flight of steps at south; rock 4 ft. from surface, 2,412 ft.

No. 23. North-west corner, and beyond Mosque platform, 35 ft. deep; small; rock on surface.

No. 24. Tank under building, south-west of No. 3; rock crosses at 9 ft. below surface, 2,425 ft.

No 25. South of No. 24, small, 37 ft. deep, 20 feet to rock, 2,414 ft.

Tank No. 11.—Explored by me, November 11, 1867, is situate on east of Mosque of Aksa, bottom 61 ft. 6 in. below surface of ground, which is 2416 ft. above Mediterranean Sea level, consists of three tanks running east and west, and connected by a passage 14 ft. wide, running north and south, 100 ft by 60 ft., contains an area of 80 ft. by 55 ft.=4,400 sq. ft., and is capable of holding 700,000 gallons of water, while the "Great Sea" may contain 1,000,000.

Steps run up along the west side, and issue close to the mouth of cistern, cut out of solid rock; roof of same, flat, and 30 ft. below ground line; surface of rock 19 ft. below ground line.

The vaulted passage from Triple Gate runs over this passage.

CHARLES WARREN.

XVII.

JERUSALEM,
November 22nd, 1867.

MY DEAR SIR,

I have but little to tell you by this mail with regard to the works: the mining-frames have arrived at Alexandria, and I hope to see the first instalment next week; the tracing paper and compass have turned up safely. Mr. Moore found them at the Consulate at Alexandria and kindly brought them on. The photographs must be making a long sea voyage, for they are now two mails behindhand and I can hear nothing of them; I am much in want of them.

I am going to try again to-morrow at the passage under the Single Gate,* but I fear we shall not be able to get further than we have done already. It is evident that the passage has been filled up intentionally, and as there are some very large stones jammed together at the end, I don't see how we are to get through them. The passage leading east is the entrance to a shaft which probably opens into the vaults above.

At the Kedron we are now about 40 ft. under the present false bed and 70 ft. to the west of it; we have found rock again, but I do not think we have yet come to the original bed, and shall not know until we get more mining frames. Of this we are now certain, that the rock east of the East Haram wall stands at an angle of more than 30 degrees; so that Josephus is again proved to be right when he says that the temple cloisters extended to the east to the edge of the rocky slope. We have met with some very large stones and some pottery.

At the Muristan we have had to fill up our trench in a hurry; the rains came on, and ploughing is going on everywhere. Already a part of the open space is ploughed up and sown with broad beans. I am very much disappointed in our excavations there; we did a great deal of work and found nothing but confusion in the shape of old walls running at each other in all directions. We went 40 ft. down in two places and found no signs of rock. The Greek patriarch says he does not want the tank, so I shall make a hole in the bottom of it and sink through it in search of rock, though I am not certain that it does not crop up in one place, and will examine it first.

Outside the Dung Gate we are sinking a shaft to find the other end of the passage found at the S.W. angle of the Haram wall;† we are 26 ft. down and have not yet come to it.

I have left the passage at the Virgin's Fountain till I hear from you; the only way I can see of exploring it properly is to tumble all the *débris* down the shaft and so fill it up, as it is so dangerous at present.

At No. 6 Shaft, west of Robinson's arch, we have been examining the wall it is very curious. I sent you a model of the lower part; the wall running E. and

---

* See Letter of 12th October. † See Letter of 2nd October.

W. is 14 to 15 ft. thick, but I cannot believe it ever was one of the piers of the bridge. The masonry, though very ancient, is not in keeping with that of the Haram wall; it is about 15 ft. high above the rock, the core of the wall only remaining in the upper parts; the remains of a house rest on the top of the wall.

We have been opening some conduits near Burj el Kibryt, on the outside of the wall. They appear to have come from a place under the Jews' Hospital. They are about 1 ft. 9 in. by 2 ft., and are in too bad repair to be explored. Similar ducts were met with in the spring, when extending the hospital, but they were equally out of repair.

Under Wilson's arch to south, we are sinking a shaft alongside of the Haram wall to see what it is like. We are down 15 ft., the stones are bevelled and are of the usual height, 3 ft. 9 in. I should think that the Greek or Roman foot had been in use in building the Haram wall, as the stones generally are in measure multiples of our English foot very nearly.

A wall has just been found in the gallery at the Kedron, rough rubble stones 2 ft. by 1 ft. 6 in.

I send two copies of the rough embodiment of my hill-sketching west of the Jordan, reduced by photography; the lines in the upper part of them are blurred, probably by the action of the wind on the plan while the plate was being exposed. The lower portion about Wady Kelt is the style according to which I should propose making the fair plan. It differs somewhat from that of Anderson, but so it must do of necessity, as at present we have no uniform scale of shade for plans 1 inch to the mile; and as the country I have worked over is more rugged and broken up, I have adopted a lighter shade.

I have great confidence in the positions of all places on my map north of Dawaimeh; of those parts about Gaza I am not so certain; we were among the Bedouins without any guard, and the observations had to be hurried, as the Arabs became very impatient, and it required some tact to prevent a quarrel, there being several of the Southern Bedouins about, attracted by the corn harvest.

The coincidence in position of Beit Jibrin, as fixed by Lieutenant Anderson and myself, is remarkable, since it was obtained by different methods. We differ one mile in longitude with regard to Ain Shems; but it is a ruin straggling along a hill running east and west, and we may have taken opposite ends. In that case, our latitudes agree to 4 minutes.

The whole of my work is based upon the position of Ramleh Tower and Jaffa, as given me by Lieutenant Anderson, and by my observations at Tell es Saffyeh for latitude; all other points are obtained by triangulation and checked at Esdud, Ascalon, Gaza, Sorah, and Beit Jibrin by observations for latitude.

The method I adopted was observing α Polaris morning or evening for meridian with a 5-in. theodolite, and taking rounds of angles to all villages in sight at same time. By these means I obtained a complete set of triangles connecting the following points, viz., Ramleh Tower, Jaffa, Yebneh, Esdud, Ascalon, Gaza, Tell es Safîyeh, Neged, Dawaimeh, Tell Bulnard, Arak Menshîyeh, Bint Ula, Tell Zakaria, Beit Attab, Beit Natif, Deir el Howa, and Surâh. The other villages were fixed partly with compass and partly with theodolite. At its best, I consider the method I have adopted to be a vicious

system, but vastly preferable to any that have been used hitherto, except Lieutenant Symonds' triangulation, which was done under more favourable circumstances than can exist in the present state of affairs. I should have preferred to continue Lieutenant Symonds' triangulation down into Philistia, and I hope at some future period it will be done; but it would be expensive.

You will see by my tracing that the existing plans could be of little use as a guide to one who did not know the country, and I am not certain that they were not a hindrance, as I spent time in looking for villages which do not appear to exist—for instance, Kadûm and Saber. Arak es Sewerdan is in Van de Velde's map, about 3 minutes too far to south. Tell et Turmus is a village near the wady, and not a hill. The three Sawafirs are quite out of place.

The villages are all like so many peas, and unless they are each visited and angles taken from them, I defy anybody to make a correct map. I do not accuse the fellahîn of willingly putting one wrong, though they are quite equal to it, but they are quite unused to the exercise of their eyes except as regards petty larceny, and it is difficult to make them understand what is wanted. I should like to ride over all the country again and put in the *smaller* features of the hills, which could not be done while fixing villages.

Yours very truly,

C. WARREN.

XVIII.

JERUSALEM,

December 1*st*, 1867.

MY DEAR SIR,

The fifty-one cases of mining-frames have arrived, and we are using them in the Kedron and at No. 5 Shaft, in the Tyropœon, west of Robinson's Arch. I am very anxious to complete the section at these two points, as I think the identification of the east and west Haram walls with the east and west ends of the cloisters mentioned by Josephus depends upon the results we obtain.

"The hill that declined by degrees towards the east part of the city, till it came to an elevated level"—appears to me to be an exact description of the Tyropœon valley as we have found it; and as Josephus remarks that the wall was built up from the bottom of the hill, we may suppose that the deepest part of the Tyropœon gully would be a few feet to west of the base of the present wall. If we find such to be the case, I cannot doubt but that this is at least the site of the ancient wall. Again, at the east wall, if we prove that at that point the rock shelves down at a steeper angle, we shall be pretty certain that at that point the cloisters ended on the east side; and I cannot see how it can be said that the ancient wall ended at the Triple Gate, which is the very highest point of the rock in the south wall.

Don't expect to hear much for two or three mails, as we shall be some time working with the gallery frames before we can make much progress. I find with these Arabs that a sloping gallery would not be profitable, and from the tank in No. 5 shaft, we are driving a gallery on, for aught I know, a novel

system, viz. at an angle of 45 degrees—frames upright, and stepped down each one foot below the last, presenting the appearance of a staircase. It suits our style of work very well. If there is a pier we ought to reach it by the end of the week; if not, we shall go on until we come to rock or the wall, and I calculate we shall arrive just at the junction of the two. We shall pass under the lowest point of Captain Wilson's shaft by more than 20 ft., so that we must at least pass through the walls he came upon. The gallery in its sloping direction will be about 120 ft. long. At the shaft under Wilson's Arch we have got down 26 ft., but are nearly stopped, having got among the *débris* of huge stones of *mezzeh*, hard as iron. If we cannot get down to the foundation of the wall, I hope to run a gallery south at 30 ft. depth, in search of the second suburban gate. The stones in the Haram Wall in this shaft have assumed the appearance of those found at S.W. angle, rough-dressed on inside.

In the Kedron we don't exactly know where we are: whether at the bottom or not. We have come across the rock or else a huge stone, and cannot know for a day or two. We have got through the wall I spoke of in my last letter.

Very truly yours,

CHARLES WARREN.

XIX.

MEDITERRANEAN HOTEL, JERUSALEM,
December 12th, 1867.

MY DEAR SIR,

During the last fortnight I have been occupied in exploring cisterns and passages in and about Jerusalem, and it appears to me that the great question of the ancient Water-supply is soon likely to draw some attention.

I should have preferred waiting for another mail before making any observations on the subject; but as I know you are anxious to hear what is going on, I will endeavour to point out to what our present imperfect results in excavating are tending.

1. About a mile south of the village of Lifta,* on the crest of a hill, is a chasm in the rocks, about which there are many traditions, and which we failed to explore in the spring. We went there last Monday, provided with three ladders, reaching together 120 ft., and a dockyard rope 165 ft. long. We had three men to assist in lowering us on the rope. The entrance from the top just allows of a man squeezing through, but as you descend, the chasm opens out until at 125 ft. it is about 15 ft. by 30 in. At this point is a ledge, and we rested there while we lowered the ladders another 30 ft., to enable us to descend to the bottom, which is at the great depth of 155 ft. from the surface. The chasm is exactly perpendicular, and the bottom is horizontal. Water was dripping quickly from the rocks, but ran out of sight at once. On the floor was a rough stone pillar, and near it the skeleton of an infant; close to the pillar is a cleft in the rock, very narrow, into which the water was running. I got down into this, but it is a crevice which gets narrower and narrower, and there being no hold, I slipped down until my head was about 4 ft. below the surface. Here I stuck, every movement jamming me tighter down the cleft. Ten minutes of desperate struggling, and the help of a friendly grip, brought me to the surface again, minus a considerable portion of my skin and clothing. On ascending, we had some little excitement—at one time the grass rope-ladder caught fire; at another, the men suddenly let me down nearly three feet, the jerk nearly wrenching the rope out of their hands.

I cannot help thinking that this cleft is partially artificial. I have not yet ascertained its level with reference to Jerusalem, but there is the possibility of its being in connection with the cleft where we were excavating near the Russian buildings, which some suppose to be the shaft of an aqueduct by which the town used to be supplied with water.

2. *Within the walls.*—I have examined and surveyed the large tank at the Burj al Kibryt; it is fully described at p. 221, Lewin's "Siege of Jerusalem." The plans and sections shall be sent by an early mail.

I have also examined the Hammâm esh Shafa.† Captain Wilson's plans give every information on the subject. The smell of the water was disgusting, exactly similar to what is encountered in any of the dirty bath-rooms of Jerusalem. I conclude that a portion of the dirty water from the baths

* Two miles N.W. of Jerusalem; probably the ancient Nephtoah.

† A well outside the Bab el Kattanin, on the west wall of the Haram.

finds its way back again into the well. The level of rock at this well I calculate to be 50 ft. below the surface of the Haram Area. On ascending, I found a second shaft reaching from top to bottom, and it is evident that at one time the water was obtained by means of a Na'ura, or "Persian water-wheel" (p. 276, "The Land and the Book"), which leads one to suppose that water may have then been more plentiful than it is at present.

3. *Siloam.*—I have examined and surveyed the rock-cut passage leading from the Virgin's Fount to Siloam. We entered from the Siloam end, so as to have as much clean work as possible. For the first 350 ft. it was very plain sailing; the height of passage sloping down from 16 ft. at entrance to 4 ft. 4 in; the width 2 ft.; the direction a wavy line to the east. At 450 ft. the height of passage was reduced to 3 ft. 9 in., and here we found a shaft leading upwards apparently to the open air. This might be made use of to great advantage by the owners of the soil overhead. From this shaft the passage takes a north-easterly direction, and at 600 ft. is only 2 ft. 6 in. high. Our difficulties now commenced. Sergeant Birtles, with a fellah, went ahead, measuring with tape, while I followed with compass and field-book. The bottom is a soft silt, with a calcareous crust at top, strong enough to bear the human weight, except in a few places where it lets one in with a flop. Our measurements of height were taken from the top of this crust, as it now forms the bottom of the aqueduct; the mud silt is from 15 in. to 18 in. deep. We were now crawling all fours, and thought we were getting on very pleasantly, the water being only 4 in. deep, and we were not wet higher than our hips. Presently bits of cabbage-stalks came floating by, and we suddenly awoke to the fact that the waters were rising.* The Virgin's Fount is used as a sort of scullery to the Silwan village, the refuse thrown there being carried off down the passage each time the water rises. The rising of the waters had not been anticipated, as they had risen only two hours previous to our entrance. At 850 ft. the height of the channel was reduced to 1 ft. 10 in., and here our troubles began. The water was running with great violence, 1 ft. in height, and we, crawling full length, were up to our necks in it.

I was particularly embarrassed: one hand necessarily wet and dirty, the other holding a pencil, compass, and field-book; the candle for the most part in my mouth. Another fifty feet brought us to a place where we had regularly to run the gauntlet of the waters. The passage being only 1 ft. 4 in. high, we had just 4 in. breathing space, and had some difficulty in twisting our necks round properly. When observing, my mouth was under water. At 900 ft. we came upon two false cuttings, one on each side of the aqueduct. They go in for about 2 ft. each. I could not discover any appearance of their being passages: if they are, and are stopped up for any distance, it will be next to impossible to clear them out in such a place. Just here I involuntarily swallowed a portion of my lead pencil, nearly choking for a minute or two. We were now going in a zig-zag direction towards the north-west, and the height increased to 4 ft. 6 in., which gave us a little breathing space; but at 1,050 ft. we were reduced to 2 ft. 6 in., and at 1,100 ft. we were again crawling with a height of only 1 ft. 10 in. We should probably have suffered more

* The "Virgin's Fount" is a spring, the waters of which rise suddenly at irregular intervals, and subside again shortly after rising.

from the cold than we did, had not our risible faculties been excited by the sight of our fellah in front plunging and puffing through the water like a young grampus; at 1,150 ft. the passage again averaged a height of 2 ft. to 2 ft. 6 in. At 1,400 we heard the same sound of water dripping as described by Captain Wilson, the Rev. Dr. Barclay, and others. I carefully looked backwards and forwards, and at last found a fault in the rock, where the water was gurgling, but whether rushing in or out I could not ascertain. At 1,450 ft. we commenced turning to the east, and the passage attained a height of 6 ft. At 1,658 ft. we came upon our old friend, the passage leading to the Ophel shaft,* and, after a further 50 ft., to the Virgin's Fount. Our candles were just becoming exhausted, and the last three angles I could not take very exactly. There were fifty-seven stations of the compass. When we came out it was dark, and we had to stand shivering for some minutes before our clothes were brought us; we were nearly four hours in the water. I find a difference of 42 ft. between my measurements and those of Dr. Robinson, but if he took the length of the Virgin's Fount into account, we shall very nearly agree.

4. *Muristan.*—We have come to the rock at a depth of over 70 ft. in the shaft N.E.

5. Below the Bir Eyub there is a spring some 500 yards down the wady. I have had this opened, and at a depth of 12 ft. a stone suddenly rolled away, and revealed a staircase about 25 ft. deep, and at the bottom passages leading north and south. We are now at work clearing away the rubbish. Steps and passages are cut in the rock; the latter are about 6 ft. high, and may have been for leading off the Jerusalem waters out of reach of an enemy investing the city.

6. *Kedron.*—We have met with a good many hindrances in this gallery, but are now 90 ft. from the entrance.

7. *Robinson's Arch.*—I am on the tip-toe of expectation about this gallery. We are now about 55 ft. deep, and are only 54 ft. from the Arch. We cannot descend, as we are working along a smooth-cut face of rock underneath us and to our right.

8. *The Pool al Burak.*—We are now about 45 ft. below the surface, and getting on but slowly.

9. *Huldah Gate, at south end of double passage below the Aksa.*—Within the gate I have removed the stones and examined the passage through the wall at the south-west end of the great tunnel; the wall is about 16 ft. thick, and very rough on the outside. It is backed up with earth. I do not see any signs of the continuation of vaults or buildings to the west of this passage; this is an important negative discovery. On Saturday I am going to explore some other passages I have found under the Aksa.

10. I have been examining the western wall of Haram Area to north, and have found a cistern, where I think I can do something towards baring the wall. On 2nd January I hope to be able to send you a correct section through the Tyropœon Valley and Kedron, with the south wall of the Haram Area in elevation. At the same time, I shall be able to send you an approximate elevation of the southern half of the western Haram Wall. From what I can see at

* See Mr. Warren's letter of October 28, pp. 37—39.

present, it would appear that the ancient gate under the Bab el Magharibeh * (which I shall call Barclay's Gate) must at the level of its ancient roadway be some 40 ft. or 50 ft. above the bottom of the Tyropœon gulley, in which case there was probably a bridge here also, unless the gulley was filled up when the wall was built.

I have reason to believe that the Tyropœon gulley turns sharp off to the east after passing the Haram Wall, and joins the Kedron above the Virgin's Fount, thus cutting off Moriah from Ophel. This idea is founded on the supposition of the deepest part of the Tyropœon gulley being west of the Haram Wall, which, however, is not yet proved.

I send you a sketch of the position in which I suppose the gulley to be; if this turns out to be correct, then there will be good reason to suppose that the Hammâm esh Shafa is connected with the Virgin's Fount.

Very truly yours,
CHARLES WARREN.

XX.

JERUSALEM, *December 21st*, 1867.

MY DEAR SIR,

I have been so busy exploring this week that I have not time left to enter much into details.

1. *Kedron.*—Gallery driven 105 ft., ascending gently.

2. *West Wall of Haram.*—Under Wilson's Arch, 55 ft. below bottom of pool; at about 45 ft. water was found: it tasted like that at the Virgin's Fount. Excavation was made through the water to a depth of 2 ft., and then had to be stopped. For four days the water was carefully examined, and always found to be running through the bottom of the shaft. A very heavy day's rain came on, and next morning the water had disappeared, and we have since been able to excavate 10 ft. lower. It is most curious, and the only solution I can see to the question is by supposing that a stream of water at the bottom of the Tyropœon gulley had become dammed up, and that the heavy rain, washing away the impediment, enabled it to flow at a lower level. From different causes, I now find so many probabilities with regard to a stream flowing down the Tyropœon Valley, through the midst of the land, that I almost regard it as a certainty. From this shaft at Wilson's Arch I intend, if possible, to drive a gallery westward, to seek for the stream.

3. *Robinson's Arch, Shaft* No. 6.—In my last account (Dec. 12) we were driving eastward, along the rock, with a face of rock to our right. At about 54 ft. from the Haram Wall we found rock to our front and also to our left. The gallery happened to be driven in an artificial cutting in the rock, just a little larger than the frames, and this was only found out when we got to the end of it, and had rock on four sides of us. On poking up the rock a fine bevelled stone was found *in situ*, and concluding that it was the western pier of Robinson's Arch, I altered the gallery, raising it 12 ft. Yesterday we came upon the massive wall again, and I send you a section of it. Only two courses

* In the west wall of Haram, south of the Wailing Place.

of stone are *in situ* at the point we have struck the pier. They are splendid stones of hard *mezzeh*, the lowest course 3 ft. 6 in. high, the upper 3 ft. 9 in., which latter is the height of the large stones in the Haram Wall. The stone we are working over weighs at least 7 tons, but there is no reason why it should not be much larger, as I cannot yet get to the end of it either way. I have no reason to doubt about this being the pier, but, of course, we cannot consider it proved until we can get a look at the other side of it.

4. *Double Passage below the Aksa.*—Search was made on all sides of this passage. The "Well of the Leaf" was examined, and at the bottom was found a curious arch of tiles (like Malaga bricks): it has the appearance of having acted as an outlet to some subterranean flow of water. In examining the aqueduct which leads through the double passage to the well, a blocked-up passage was found, and, on removing the rubbish, it was found to lead into several ducts, which the plan* will best describe: they are about 5 ft. below the present Haram surface, and are similar to those beneath the Sakhra platform: one of them is rendered with a very curious plaster of broken pebbles, and somewhere in its length it is possible there may be the shaft to a tank beneath, as the inclination of the ducts appears to be towards this passage.

At the north end of the double passage, to the east, there is a vestibule or vaulted chamber 17 ft. square: its arch is similar in construction to that of the northern part of the double passage. It may perhaps have been built to serve as a guard-room or porter's lodge to the gate.

Entrance to the "Tomb of Aaron's Sons," in the Aksa Mosque.—The wall at this point was broken through, and found to be very rough on the outside: 10 ft. 6 in. thick; stones, 2 ft. by 1 ft. 6 in. by 1 ft. 6 in; it is backed up with made earth.

"Standing-place of Elias," in the Aksa.—The end of the passage or doorway here was broken through; it is about 1 ft. 6 in. thick. Behind it is a mass of loose rubbish, and after removing about a ton of it I was able to get through, but could see nothing to lead me to suppose that there is anything beyond but made earth.

The conclusion I have come to after making these excavations is that the "double passage" is a tunnel built through the made earth of the Haram Area, and quite unconnected with any vaults on either side. I can only account for the ducts I have found to the west of it by supposing that at one time the passage only extended for 190 feet from the south wall of the enclosure (at which time the Aksa Mosque could not have been in existence), and that the ducts were used for collecting the surface water. When the Aksa was built, it appears that the passage was extended to its present length (260 ft.), but on the east side only, as a heavy mass of masonry supporting a considerable portion of the Mosque rests just where the western passage should come; also, it appears that in order to prevent the arch of this extended passage cropping up above the Haram surface, it was necessary to cut down the old ramp to a gentle slope, and by that means to cut through the duct leading to the well of the Leaf. I find there is a break in the arch of the eastern passage just where the western terminates, and the ramp at that point also changes its inclination.

* Lithograph, No. 9.

I have been taking many visitors over the works lately, and I can see that they do not at all realise what is going on until after they have been slung down some of the shafts and squeezed through a few of the holes.

Somebody has opened the Tomb of Jehoshaphat; it is the place where the Jews threw away the old copies of their books. The Rabbi seemed to think that I had done it, and sent to ask me to close it up I sent at once to tell him that I had nothing to do with it, and to assure him that I did not touch the Jewish tombs. The Sheikh of Silwan also sent him word that he might be sure it was not my work, as if we had been there it would have been closed up again and nobody would be any the wiser. I am going to see the Rabbi in a few days, and show him the plans and sections of the Haram Wall, &c. I have offered to employ the Jews in excavating, but it is out of their line altogether.

Very truly yours,

CHARLES WARREN.

XXI.

MEDITERRANEAN HOTEL, JERUSALEM,
January 1, 1868.

MY DEAR SIR,

The weather has been very boisterous for some days, several steamers have been unable to touch at Jaffa, and our letters by the last mail have gone on to Beirût, and are not expected back till Saturday. The rain has been falling in torrents, and consequently, our progress has been small. Our excavations have been as follows:—

1. *Birket Israil.*—Commenced in search of rock: after getting sixteen feet through loose stones and boulders, the rains swamped out the workmen; this excavation will be continued in a few days.

2. *Kedron.*—Gallery ascending gently one in ten, 125 ft. in length: entrance has twice been choked up by debris brought down by the heavy rains.

3. *Under Wilson's Arch.*—The depth last post was given as 55 ft. instead of 50 ft. At 50 ft. 9 in., rock was discovered and the base course of the Haram Wall is found to be let into the rock: I wished to have driven a gallery to the west to explore the gully, but the pick could make no impression on the concreted mass of rubbish, and I cannot use gunpowder so near the Haram Wall.

At 21 ft. 6 in. from the surface I am driving a gallery to the south along the Haram Wall in search of Fergusson's Gate; we have got in about nine feet.

On the opposite side of the archway a shaft has been commenced to examine the east side of the pier, without any results at present.

4. *Aqueduct south of Bir Eyub.*—This has been cleared to the north for 107 ft., the roof is ascending rapidly, and we may hope to find an open passage in a few days. Where we are working it is right up to the roof with silt, without a stone in it. At the rate we are getting on now it will take 18 months to get up to Bir Eyub, so that if after another hundred feet I still find it completely choked up I shall relinquish the work there. I shall be very sorry to do so, as I think

that it is connected with the ancient system of water supply, and will probably lead to interesting results.

5. *On the Hill of Ophel, 350 ft. south of Double Passage.*—Sinking shaft to try the depth of rock; recently commenced.

6. At 27 ft. east of Single Gate I examined the Haram Wall for several feet beneath the surface, in search of an opening into a passage which I believe o exist under the vaults. I could find no signs of any opening. You may observe that in the bay east of Single Gate the piers of the arches are unusually wide apart, and under that space I think a passage must exist; however I can see no means of getting down to it through the masonry, as most of the stones are of *mezzeh*, of several tons weight, and so hard as to make an impression on the spalling hammer.

7. *Vaults east of Aksa.*—These vaults are now inaccessible to visitors, the broken arch having been repaired; there is, however, a small window, or opening, from the so called "Cradle of Jesus," and through this we crept or squeezed with some difficulty, as it is only 9 in. wide and 19 in. high. I made an elevation of the west wall of these vaults, and also an excavation through the wall for about 6 ft. and found nothing but made earth. I wish to drive a gallery from this wall underneath the Aksa, and hope to commence in a few days.

8. *Pier of Robinson's Arch.*—The results obtained here are very puzzling. The pier is 12 ft. 2 in. thick, and the distance to the Haram Wall, from east side of pier, is 41 ft. 6 in. There is a very curious opening, or gateway, in the eastern face of the pier, and beyond it towards the Haram is a pavement *in situ*, which has been traced as yet for 8 ft.—thus reducing the gully to a width of 34 ft., unless we suppose that it is the top of a low level bridge which has never been destroyed. Altogether it is incomprehensible, and cannot be cleared up before this mail, goes out. We are now apparently among the ruins of the upper bridge, and have got out some very large paving stones, and have had to break up some still larger stones of 3 and 4 tons. Luckily they are all similar to those at Robinson's arch, and are very soft; the paving stones are of very hard *mezzeh*, and their surface is polished. We have had to get them out whole, and have been two afternoons about it, six of them weigh 2½ tons. I cannot find anybody about who is competent to assist Sergeant Birtles, and the Fellahîn cannot be left to themselves for a moment while any work is being done, the neglect of which might cause accidents: even in bringing those paving stones up it took us both all our time to keep things going; and in getting down the bigger stones in the galleries the men are afraid to go on by themselves. To get on properly we ought to have a couple of English miners to assist Sergeant Birtles. I get so much manual labour just now, that I have little time to do anything else. I will not send any sketch of the opening in the pier, &c., by this mail. Perhaps in ten days more something definite willl be known.

It will be noticed that the span of Robinson's arch is similar to within six inches the same as that of Wilson's arch.

What with the rains and Ramadan, we can get very little work out of the men; they are quite useless with the thermometer at 40 deg. F.; and now for a month they can neither eat nor drink during the day, so that they become

exhausted before they finish work. They work much better in the summer time. On a rainy day they would much rather lose their pay than go to work; they have no idea of working to keep warm, and present a ludicrously forlorn appearance standing first on one leg and then on the other, like a brood of half-drowned cochin-china chickens. Before the winter is over here I expect they will have improved very much.

A public execution took place here a few days ago of a Taamirah Bedawi: he had murdered a Jerusalemite Mahometan, and was lying in prison. The widow and brother-in-law of the murdered one, finding justice lagging, telegraphed to Constantinople, and obtained a firman for the Taamirah's execution: his family offered £200 for his release, but the widow of the Jerusalemite was too public spirited or too vindictive to allow such an offer to have any effect upon her, and it was settled that the man should be decapitated.

He was brought out for that purpose to the Jaffa Gate; but his family still seemed to think there was hope for him, and when the time was up made a last appeal to the widow of his victim. During the short conversation which took place with her, the convict opened his mouth, eyes, and nostrils in his endeavours to hear her replies, and when he was put out of his dreadful suspense by finding her inflexible, he appeared to be already suffering the pangs of death.

The execution was truly barbarous; the unfortunate man first got a cut across his shoulders, and turned round to say, "You are hurting me;" then the amateur executioner, finding that sixteen blows did not sever the head from the body, turned the man upon his back, and sawed away at his throat as if he were killing a sheep. Eventually he managed to get the head and part of the shoulder off the trunk, and together they were left during the day for the diversion of the multitude.

This execution will no doubt have a very salutary effect on the surrounding Bedouins.

Very truly yours,

CHARLES WARREN

XXII.

JERUSALEM, *January* 11, 1867.

MY DEAR SIR,

During the last ten days there have been a great many visitors to our works—nearly twenty. The discoveries of the pier of Robinson's Arch and the fallen arch stones have created no small stir in Jerusalem; and all classes wishing to go down to see them. I have had a visit from Mr. Berlina, the son of the late Chief Rabbi of London, and have made arrangements for taking a party of learned Jews down next Monday; he talked about bringing a hundred, but it will take half a day to show ten all that there is to be seen. Yesterday the works were crowded with Jews wishing to go down: we were obliged to put them off until after working hours, so as not to interfere with the workmen.

To-day, when taking an English party round, I found some Jews seated at the top of the shaft, and asked them to come down: they declined on account of its being the Sabbath. One of our party explained that the Sabbath day's journey might be taken under ground as well as on the surface, and then one of them joined us and came down.

On Thursday I took the Consul-General of France and party over the excavations, and they were particularly interested and delighted with what they saw. Our progress on the whole is very slow, as now we are among large loose stones. We are trying the fellahin's courage a great deal.

WORKS IN PROGRESS.

Makhama, under Wilson's Arch.—Gallery driven to south along Haram Wall for 30 ft. No sign of any opening in wall corresponding to Barclay's Gateway.—Shaft under Arch on west side; a curious recess has been found in the pier similar to those at Robinson's Arch, except that it extends through three courses: a sketch of this will be sent when the shaft is completed.

Pier of Robinson's Arch.—This has now been bared to north for 25 ft. and the corner to west has been turned. The builders of this pier, in a truly economical spirit, characteristically Jewish, have built it with recesses so as to save a very large portion of the stone, which would otherwise have had to be used. As far as I can judge of the pier at present, it is 45 ft. long and 12 ft. through: it is built with a hollow space inside of about 5 ft. width, and the whole pier seems to be made up of smaller ones averaging 6 ft. in length, the bays or openings being similar in dimensions. These little piers are the height of two courses (3 ft. 9 in. and 3 ft. 6 in.), 7 ft 3 in; and lying across them and the bays are lintels, the largest being 12 ft. 6 in. in length, 3 ft. 9 in. height, and weighing over ten tons.

I wish to know whether in the other parts of the world or Syria, similar economical designs have been found in building where arches are not used. No doubt this method of building may be considered, as far as it goes,

as characteristic of one particular epoch, probably before the arch was in general use; and yet it differs entirely from the massive styles of Egypt and Assyria. East of the pier, on a level with the rock surface, is a pavement which we have examined for about 18 ft.; and on it, lying huddled together just as they fell, are the actual voussoirs of the great viaduct called Robinson's Arch: they lie in lines north and south, and between them one can squeeze with difficulty for some 10 or 15 ft. each way. They are in our way going east, and though they are of *melekeh*, they are so hard that the men cannot break them, and I have had to blast them. It will take us at least a month more thoroughly to examine this pier and all that pertains to it.

At the Kedron, the rock is beginning to rise rapidly, and I shall close the gallery up in a few days. We are now 145 ft. from entrance.

At the Aqueduct below Bir Eyub we are getting on slowly.

Very truly yours,

CHARLES WARREN.

XXIII.

WORKS IN PROGRESS.

JERUSALEM, *Jan. 22nd*, 1868.

We have made a great discovery this week—viz., a system of vaults, tanks, and aqueducts, in connection with, and to the west of Wilson's Arch: they are apparently of similar age and construction, and are likely to throw considerable light on Jerusalem topography; in fact, it appears to me that this system of vaults is the key to underground Jerusalem, and, if we are not interfered with, we may reasonably hope very soon to have a good knowledge of the great embankment which runs across the Tyropeon Valley.

Makhama.—Wilson's Arch.—Shaft on east of pier continued to a depth of 41 feet; pier below, a depth of 21 ft. 6 in., is composed of rough hewn stones. Hole broken through pier to west for 10 feet in search of another arch. Two holes were made in the chamber A in search of continuation of Wilson's Arch to west; and on Saturday, 18th instant, the hole to the north was found to open on to a space covered by a trimmer arch, running east and west, resting on the arches in continuation of Wilson's Arch. These arches are in two sets, side by side, and make up together the length of Wilson's Arch. The span of the northern set is only 12 to 13 feet, that of the southern from 22 to 23 feet; underneath these arches are others at a lower level, which may have been used as tanks, and in them are some curious troughs or aqueducts. To the west of the upper vaults are passages which the plan must explain; they run in several directions, and are blocked up loosely at the ends. From one of the passages was a hole downwards, and on being lowered into it (chamber B) I was astonished to see a white marble pedestal. I was in great hopes there

might be an inscription on it, but it is quite plain, and may at one time have formed part of a column in support of the roof. In one angle is part of a pilaster, the capital of which has on it a double ram's horn, very similar to that found at Arak el-Emir. (See De Saulcy's work, page 223; French edition.) It has the appearance of great antiquity. I am in hopes we may find other traces of sculpture.

I am so short-handed that I have no time to give you a regular description of this place. I have a great deal more than I can do, and should have a clerk or draftsman to assist me, and also several English miners to superintend and work with the different parties. If you could send me some men out by the next mail, or get them from Malta, Sappers, it would be a great assistance. I took on a Greek a few days ago to assist Sergeant Birtles, but he is worse than useless, for he seems to be getting the men back into their wretched Arab ways.

Robinson's Arch.—We have done little towards the east, for the stones present such difficulties; to the north we have tapped a tank which has been running stones for several days; to-day it is nearly exhausted, and we have got several peeps into a big cavern.

Kedron.—At 160 feet from entrance the air became very impure, but on going a little further a rushing noise was heard, which proved to be a stream of pure air 100 feet below the surface. We have now come to several walls, and the work looks interesting.

Bir Eyub.—At the aqueduct below Bir Eyub we have been retarded by the heavy rains. The floor is being deepened, so that there may be room for a wheelbarrow.

Close to Bir Eyub we have found another aqueduct of masonry, which seems to run to the eastern side of the valley.

Very truly yours,

CHARLES WARREN.

XXIV.

JERUSALEM, *February 2nd*, 1868.

MY DEAR SIR,

Serjeant Birtles has recovered from the accident he met with, and is now about.

Wilson's Arch.—We have made some further interesting discoveries in prolongation of Wilson's Arch. I shall delay sending you a section until we are still further advanced.

We have had some amusing incidents lately on the works. A few days ago, the Cadi, or Judge, sent his servants to the Makhama to order some of our workmen to come to him at once: of course, they refused, and the servants in order to oblige them to come, stole their upper garments, which were lying near

the entrance. I at once bought one of these articles, and then sent to tell the judge that he had my property in his possession, which appeared to perplex him considerably. A day or two afterwards his servants appeared with the garments at the door of the Makhama with orders to leave them there. They were warned off the premises by our interpreter, and I sent to tell the judge that he must either bring the clothing to the hotel, or keep it: it has since been brought to the hotel, and there the matter rests. The Jerusalem Effendis seemed rather pleased to find that the Turkish judge had put himself in such a ridiculous position.

When the overseer and men were lately dismissed from Robinson's Arch for allowing a guide to take some travellers down the shaft without permission, the remaining men were particularly warned not to allow any unauthorized persons to approach the mouth of the pits. On Friday last, the two little sons of the Pacha came into our grounds and wanted to go down. The fellahin began hunting them away, and in spite of the remonstrances of Effendi Abu Seud, whose house looks down upon our works, they drove them out of the grounds—"for," said they, "we could not even let the Pacha himself down without permission." Next day the Pacha went down to Robinson's Arch without saying anything to me about it, and began questioning the men as to where they were excavating: he might just as well have asked the Haram Wall itself what we were doing, for the men gave the vaguest answers, and said, that if he wanted to go down, he must send up to the hotel and get permission. I don't know why the Pacha does business in this way, as he knows that I should be very willing to take him over the works if he would only let me now.

Last week, when at the Makhama, an Engineer officer of the Turks came in in uniform, and passed me without taking any notice, going towards Wilson's Arch. I passed in front of him, blew out my light, pushed over the ladies' ladder, and went down by the rope; hearing a crash, and seeing me suddenly disappear in the darkness below, he probably thought I had fallen, for he rapidly beat his retreat.

The Pacha has again sent up to the Consulate, to say that I must get his permission for every shaft I open, have cavasses on each work, and enter into an engagement not to go to the Haram Wall. I have told the consul that I cannot deviate from my present course of procedure without the consent of my Committee, unless he compels me to do so; that I will enter into no engagement about the Haram Wall, and that, if cavasses are sent on to the works, I shall dismiss my workmen, and throw the responsibility of so doing on the Pacha and the Consulate.

Our Consul has communicated my decision to the Pacha, and the "result of the friendly representation" that he made at the same time is, that I "can go on as I have been doing until further notice."

Effendi Abu Seud who lately wrote to the Pacha to complain that we were digging under his house, has apparently began to see the error of his ways, for he has been using pretty freely the stones we have been bringing up, and has come very humbly to ask us to show him the position of the tank we have discovered under his grounds, as he would like to use it.

I hope to hear next mail, that some miners are on their way out to assist

me. In another fortnight the fine weather will have set in, and I cannot allow Sergeant Birtles to do as much then as he does at present.

Bir Eyub.—The water "finds exit under an arch about ten feet" below the surface, again "rising out of the ground behind a stone fence, forty yards lower down the valley" (Barclay's "City of the Great King," p. 515).

This passage was found choked up with silt, and on clearing it out it was traced to within about ten feet of the well. An abundant stream of water is now rushing out of this archway down the valley.

The aqueduct discovered about five hundred yards below Bir Eyub, is probably the same as Ain ed-Durrage (described p. 516, "City of the Great King"). Dr. Barclay there relates, "A tradition, current amongst the Moslems, declares that there is a flight of steps, &c." This flight of steps we have discovered, only it leads down into an aqueduct instead of up to the well of Joab. It appears very probable that this aqueduct may have some connection with the well. The aqueduct is now running, with much water, which is forced up to the surface, a height of about thirty-five feet, and overflows into the wady, where it meets the stream from Bir Eyub. The united brook gets lost in a garden about a mile lower down. The stream has been running for ten days, and may probably continue for a month or six weeks. The volume of water is about equal at present to that of Ain Sultan, at Jericho.

Gallery under the Kedron.—This has been abandoned for the present on account of the heavy rains.

Robinson's Arch.—On working through the cistern found in the north of the arch, a low passage or drain was discovered, leading direct to the Haram Wall: it then branches north and south. To the north we have cleared out about seventy feet, and we can hear very plainly the working of a mill; to the south we have got about thirty-five feet, and find the roof stones are wanting.

This passage is about two feet wide and three feet high, and is of rough masonry, with flat stones laid across to form the roof.

Makhama.—It appears that there cannot be any entrance into the Haram-Area similar to Barclay's Gateway, between Wilson's Arch and the Wailing Place.

Wilson's Arch.—We are now driving a gallery across the valley below Wilson's Arch, through the red (virgin?) soil.

We have got through the first pier at a depth of 21 ft. 6 in., and at four feet to the west, have found an aqueduct which is likely to lead into a tank cut in the rock. The sides of the aqueduct are very nicely cemented.

We have made some very interesting discoveries further in prolongation of Wilson's Arch: a third and fourth arch of about fourteen feet width each, and after that a long passage running east and west, ten feet wide; we have traced it for about 120 feet, and at this point we are 230 feet from the Haram Wall. The passage is arched with well-cut stones, and would appear to have been used as a secret passage from the Jaffa Gate to the Haram Area. The lower portion may also have been used as an aqueduct. The street Bab es-Silsile, appears to lie immediately over this passage.

I had hoped that I might have been able to give you a fuller account of these vaults, &c.; but it may be some time before we are able to obtain a correct idea of the whole system. As yet there is an indication of there

being a large tank or reservoir to the south-west of Wilson's Arch, which I expect to be cut in the rock. There is a great number of aqueducts, great and small, leading in this direction.

Ophel.- I am commencing six shafts on the hill of Ophel, in order to determine the contours with regard to the continuation of the gully running down by Robinson's Arch.

With reference to the passage running south, leading from the bottom of the deep shaft near the south-west angle of the Haram Area, we have sunk a shaft 350 ft. to the south, and have had the good fortune, at a depth of 60 ft., to drop directly upon our passage. The fellahin were regularly scared when they broke up a stone and found the passage with our well-known broad arrow burnt black on the roof. The passage is now being cleared out to the south.

On carefully examining the hill of Zion (Ordnance Survey Sheet), on the ground, I find there is an indication of a valley dividing the hill into two parts. My attention was first called to this by a French author, who, in order to get over the difficulty about Mount Acra, says there *must* be such a valley; and has actually shown it on his map, calling it the Tyropœon. The suggestion is good, although at present it can be considered little more than an idea. I hope very soon to put it to the test. This valley may perhaps run southerly in the direction of Hârat el-Yahûd.

Very truly yours,

CHARLES WARREN.

XXV.

JERUSALEM, *February 22nd*, 1868.

MY DEAR SIR,

Since the 1st of the month we have had the most miserable weather; on almost every day rain, sleet or snow, until the ground has become thoroughly saturated. I find it necessary to wait for a few days, until the strong winds may have taken up some of the superfluous moisture, and as Sergeant Birtles and I both require a change, I have decided on taking our men down for a fortnight to Jericho, to search those mounds to which you referred some months ago.

Our mail has again been taken on to Beyrout, and we shall not receive it until next Monday.

We had rather a sharp shock of an earthquake on the 19th instant, at about midnight: the motion appeared to be from east to west. It does not appear that any noise was heard at the same time. It was not sufficient to make any apparent cracks in the walls, but since it took place, several houses in Jerusalem have fallen, whether from the heavy rains or earthquake seems uncertain.

Our progress has been moderate: at the Makhama we have driven a gallery along the rock under Wilson's Arch, nearly two thirds of the way In the lower chamber a shaft is being sunk in search of the rock, to a depth of 22 ft.

through masonry and rubbish. In another chamber, further to the west, we have cleared out a shaft to a depth of 18 ft. and have come upon an aqueduct running east and west, this has not yet been explored. We have still a great deal of work to do about the Makhama, but it will not pay unless we can have some English miners to look after the men; for at this sort of work the Arabs can idle without our being able to detect them.

Robinson's Arch.—The shaft sunk through the pavement 17 ft east of the pier (between the pier and the Haram Wall), has reached a depth of 20 ft. without any signs of rock; the stuff brought up is mostly masonry.

The passage which struck the Haram Wall (see p. 61) has been cleared out to the north for 180 ft. and we must be very nigh to Barclay's Gateway. Outside the Dung Gate, the passage has been cleared out 65 ft. to south, and there is no sign of any change in the direction: the course this passage takes will probably in a great measure settle the direction of the Tyropœon Gulley. We shall be able at intervals to sink down from it to the rock, and thus get a good section.

Ophel.—Here five shafts have been commenced, but the wet weather has been a hindrance.

I have found a curious Christian Coat of Arms, emblazoned on a tank at Ophel—apparently of the Knights of St. John; it is 21 in. in diameter, and raised on the plaster wall; I will draw it accurately as soon as the mud will allow me to stand under the spot.

Very truly, yours,
CHARLES WARREN.

P.S.—Feb. 22nd. The passage north of Robinson's Arch has now been cleared out for 190 ft., and we ought to be opposite Barclay's Gateway, or under the level of it.

THE

PALESTINE EXPLORATION FUND.

PATRON.

HER MAJESTY THE QUEEN.

OFFICE—9, PALL MALL EAST, S.W., LONDON.

Reports on Progress of Works at Jerusalem and elsewhere in the Holy Land, by Lieutenant Warren, R.E.

XXVI.

JERUSALEM,
May 2nd, 1868.

I enclose some plans and sketches obtained during a visit to Bittîr. The place is described in the "Later Researches" of Dr. Robinson; also by Mr. Rowland, in Mr. Williams's "Holy City." He comes to the conclusion that it is the Bæthar of the Septuagint, and not the Bether where the Jews made their last stand under Barchochba, A.D. 176. It is also described in Murray's Handbook (p. 233).

The village and citadel are about three miles S.W. of Jerusalem, and about a mile to the north is a range of hills, on top of which are some curious mounds.

A day was devoted to the examination of the ground about Bittîr. (Plan No. 11.)

Twenty men were sent to cut into one of the mounds to the north: it was found to be composed, to a depth of six feet, of stone chippings, but as it stands forty feet high no idea was obtained of its interior; there are many rock-hewn caves about, but no signs of any dwellings; the mound may possibly be simply composed of the chippings brought out when the caves were hewn.

Forty men were taken to break ground at the citadel (Khirbet-el-Jehûd); the sheikh of the village, seeing our irregular troops marching up, conceived the idea that we were come on the part of the Government to squeeze the village, and, coming at once to business, asked what we would compound for. Finding that we had only come to dig, he sent some of his men up to assist us.

The citadel is situated on a projecting spur, cut off from the range of the hill by a deep rock-cut ditch. It is oval in shape, and the sides are

steep and partially scarped. A causeway of loose stones serves at present for a communication across the ditch.

The remains of the old wall are very distinct, though many of the stones have been used for terracing up the sides of the slopes for the vineyards. The summit is nearly flat and covered over with the *débris* of ruined buildings, run over with vines and weeds.

A few of the stones of the walls are roughly squared and levelled, but there are no signs of the present walls having been built by anybody of more consequence than a robber chief.

There are two stones of about ten feet in length, which are finely dressed and "bevelled."

Excavations were made along the walls in search of older foundations, but in all cases they were found to be of the same rough description as the walls themselves, and nothing important was discovered.

Four caves were examined and cleared out; one of them appears to have been hewn for a tomb, the others probably for magazines; one of them is curious; it has a large stone bowl (five feet six inches) cut out of the rock on the floor, and the roof of the cave is so cut that a large piece like a stalactite hangs down nearly into the bowl: it gives the idea of having been used for crushing grapes or olives. In this cave there are also three passages filled with stones, which we had not time to clear out more than a few feet. There are also some well-cut stones lining the wall in one of the passages.

It appears likely that there may be many caves upon the sides of the citadel which are not open at present. The fellahîn pointed out to us a place they called "the cave of the Jews," but on digging down we came to solid rock.

Tuleil el Ful (Hill of Beans).—Generally regarded as Gibeah-of-Saul. It is a rounded hill with a mound on the top, through which rough walls appear on east and west. Excavations were made from north to south to determine the nature of these ruins, which were found to consist of the foundations of a rectangular tower (forty-eight feet by fifty-seven) with a berm nine feet wide and a second exterior wall; this latter has to the north a similar batter to that at the Jaffa Gate Tower. The walls are composed of roughly-squared stones and of rubble. In the centre of the town there is a shaft seven feet square with masonry sides, and at the depth of twenty-eight feet a stone with a circular opening in it about eighteen inches in diameter, which is the entrance to a small cavity scooped out of the natural soil (marl); cavity three feet nine inches high, and four feet in diameter. The walls in each case were bared below the foundation, and were found to rest on the marl. Some pieces of hard red wood were found sticking in the walls at a depth of twelve feet. A sketch plan and section is forwarded (No. 11).

WORKS IN PROGRESS, May 2.

Makhama.—Following up aqueduct to the south, circling shaft under second arch in search of rock.

Robinson's Arch.—Continuing section under the arch, followed channel to north as far as Barclay's Gateway, where it suddenly ends.

Ophel.—Nine shafts in progress in search of rock. A quantity of broken glass has been found in an aqueduct on a level with the rock, also some lamps.

XXVII.

August 22nd, 1868.

WORKS IN PROGRESS.

Robinson's Arch.—The section under the arch is now completed; a sketch was forwarded last mail.

Masonry and *débris* were found beneath the pavement, shown in the lithographed sketch (No. 12) to a depth of about twenty feet, when the rock was discovered, smoothed over and horizontal. On pushing on to the Haram Wall a canal was found running north and south, twelve feet deep and about six feet wide, lying over which were large stones, apparently the remains of voussoirs of an older arch.

From the appearance of the remains one would be inclined to suppose that there had been two arches at different times over this part of the valley, and that after the destruction of the first bridge the rubbish was levelled up to the height of the pavement before the building of the second.

The canal at the bottom is not the lowest point of the valley, which at this point appears to be under the Haram area.

The canal is being cleared out to the south: it ends at thirty feet in a pool whose dimensions are not yet ascertained; it is probably oval, the longest diameter being about twenty feet.

Passage leading from Robinson's Arch (described 2nd Feb., 1868) was cleared out to north until immediately under Barclay's Gateway, which again is under Bab al-Mughâribeh. The roof here was wanting but not broken, and it appeared as though we had arrived at the commencement of a tank or archway. Loose stones and shingle kept pouring in for several days without cessation, and after removing some tons it was considered desirable to desist.

The stones of the Haram Wall are here visible, similar to those above, and are probably about forty feet below the surface of the ground, and thirty feet above the rock foundations.

"*Barclay's Gateway*" would appear to have been approached from the west by a bridge, or by the filling up of the valley and a pavement, it will be desirable to ascertain which.

Passage at bottom of shaft, near south-west angle of Haram Area (described Oct. 11, 1867). This now appears to be the lowest point of the Tyropœon Valley. Along the line of the south front of the Haram Area, and farther south 300 feet, galleries have been driven along the rock east and west. The rock was found to rise on both sides. This passage has

been cleared out for a distance of 600 feet, and it is probably built along the course of the Tyropœon Gully.

South of Bir Eyub.—The rock-cut canal at 'Ain-el-Luz (fountain of the almond) was reopened to north (May 1st) after the overflow from the heavy rains had subsided, when it was found that as far as the excavation had proceeded the current of water had cleared out the silt from the bottom of the passage: the total height of the passage varying from six feet to eight feet six inches.

Night-work was commenced on 19th May, but from the number of men and the length of the passage the air became too much vitiated to allow of the candles burning, and the work could only be continued off and on until July 13th, when a set of zinc air-pipes were laid down, supplied from a smith's bellows placed near the top of the staircase; the progress was now about six feet per diem, until August 17th, when an additional party, for night-work, was put on.

On August 17th, at a little over three hundred feet from the commencement, a branch passage to east was opened out, which proved to be a staircase cut in the rock, leading up towards the surface at an angle of about forty-five degrees. Endeavours to find the outlet on the surface have been unsuccessful, and the work is now proceeding with difficulty up the incline. Large stones have been met with which render the work somewhat dangerous.

When this second staircase is opened out the excavations will be enabled to proceed more rapidly and with less expense.

The canal still varies from six feet to eight feet in height, and from three feet nine to four feet six in width: wheelbarrows are in use.

It may be premature to speculate on the original object of this rock-cut canal, but the fact of its being connected with the surface by staircases within 300 feet of each other, points rather to its having been constructed as a duct for pure water than as a drain for sewage.

Aqueduct near Bir Eyub.—A sketch plan (No. 13) of this is forwarded—the overflow from the well appears to come in at B, at the point where the ancient aqueduct joins the more modern portion; at C the roof had fallen in and the aqueduct could not be traced.

Gallery under the Kedron.—At 175 feet from entrance the work was found to incline upwards at an angle of about thirty degrees, and as the *débris* was composed of loose stones it was found impracticable working straight forward; an attempt was made at going forward by zig-zags, but it had to be given up after a few feet, and the gallery was finally abandoned in February, 1868; the mining frames were got out with some difficulty. The section enclosed gives all the information obtained. (Plan No. 15.)

No water was found at the original bed of the Kedron.

XXVIII.

JERUSALEM,

Sept. 2nd, 1868.

Wilson's Arch.—I enclose herewith a sketch plan of the vaults, &c., discovered this year to west of Wilson's Arch (No. 17). Considerable difficulty has been met with in surveying them, as in many places they are all-but filled up with rubbish, and there are no ready means of getting rid of it. I fear it may be some time before we shall be able to find a continuation of the great passage. We have reached two hundred and fifty feet west of Bab es-Silsile, and are immediately under the street Tarik Bab es-Silsile.

Haram Wall.—The courses of stone in this wall, with marginal drafts, (" bevelled ") usually run from three feet six to three feet nine in height, but between the double or Huldah Gate and the Triple Gate there is a course the height of which is from five feet ten inches to six feet one inch: so far this is described in Captain Wilson's notes.* On a recent examination of the south wall I found this large course continued to the south-east angle, and thence running north, along the east wall, for twenty-four feet.

An elevation is enclosed (No. 16) by which it may be seen that the course is unbroken between the Huldah and Triple Gates; thence to the Single Gate there is one stone *in situ*, and from a point seventy feet from S.E. angle to the angle itself, the course again is in a good state of preservation (see Ordnance Survey photograph of S.E. angle).

I do not find that this has been made the subject of remark in any existing work, and as it bears directly upon the question of the unity of the South Haram Wall I add some further particulars.

This course is nearly double the height of the other "bevelled" courses in the Haram Wall. Its base is about one foot above the highest part of the rock of Mount Moriah (where cut by the south front), and consequently it is the first course in this front which can run uninterruptedly from east to west. It exists at present, more or less continuously, for 600 feet west of S.E. angle, but is not seen west of the Huldah Gate.

At the Triple Gate its base is fifteen to thirty inches above what it is at the S.E. angle, the line between these two points being straight or only a very gentle curve; in other words, the course is not horizontal, but has a fall from centre to flank of about thirty inches. It is obvious that on account of the peculiar nature of the ground a considerable rise from flank to centre in the courses would be required in order to avoid offending the eye, and it is interesting to find the courses so placed, whether from accident or design.

The sill of the Triple Gate is level with the base of this course, as are probably also those of the Huldah and Golden Gates. The sill of the Single Gate is at a lower level, but this gate has all the appearance of

* Accompanying the Ordnance Survey of Jerusalem.

being quite a modern construction, the entrance found twenty feet lower and immediately beneath it (see Letter XII. of Oct. 22, 1867), going far to support the idea that this Single Gate itself was not finished until after a considerable amount of the present *débris* in Ophel had accumulated.

At the South-East Angle, the corner stone of this course weighs over one hundred tons, and though not the largest stone is certainly the heaviest visible in the Haram Wall.

The spring of Robinson's Arch is very nearly (within a foot), on a level with one part of the top of this course.

South of Bir Eyub.—The second rock-cut staircase, described last mail, has now been opened out, and the canal has been cleared to north, for 130 feet. The progress made during the last ten days has been very fair.

Makhama.—Attempts have been made to continue this exploration of the great passage leading west, but unsuccessfully at present.

CHARLES WARREN,

Lieutenant Royal Engineers.

THE

PALESTINE EXPLORATION FUND.

PATRON.

HER MAJESTY THE QUEEN.

OFFICE—9, PALL MALL EAST, S.W., LONDON.

Reports on Progress of Works at Jerusalem and elsewhere in the Holy Land, by Lieutenant Warren, R.E.

XXIX.

JERUSALEM, *Oct. 2nd*, 1868.

Rock-cut passage above Virgin's Fount.

(Discovered 27th October, 1867.)

This has already been described in letter of 1st November, 1867; perhaps another brief description may help to establish it in the minds of those who are interested in the subject. (Plans 18 and 19.)

The hill which is generally called Ophel, extends in a southerly direction from Mount Moriah, gradually sloping down through a horizontal distance of 2,000 feet, until it becomes lost at the pool of Siloam. Its highest point, near the "Triple Gate," is 300 feet above its foot at the Siloam pool; it is bounded on the east by the Kedron, and on the west and south by the Tyropœon valley, these two valleys meeting at the pool. The descent into the valley of the Kedron is very steep (about 30 deg.), and the natural surface of the rock is covered up by *débris* from 10 to 50 ft. in height.

About the centre of the Ophel hill, to the east, in the Kedron, is the Fountain of the Virgin, an intermittent spring whose waters communicate with the Siloam Pool by means of a rock-cut canal running in a serpentine course through the hill. About three-quarters of the way up the hill, due west from the Virgin's Fount, is a vault running north and south, the crown of which is 22 ft. below the present surface of the slope. This vault spans a chasm or cutting in the rock, and the springing is from the rock; the chasm, when discovered, was over 40 ft. deep, and beyond that depth was filled up with *débris;* it, and the vault also, is 8 ft. wide; the arch was originally semicircular, but is now very much distorted. The length of the arch is about 11 ft., but 4 ft. farther to the south the vault is open, the roof being self-supporting, earth and stones, and is in a very dangerous condition. It appears that the southern wall,

on which the voussoirs overlapped, has given way and fallen into the chasm, taking with it a quantity of rubbish from several feet above the crown of the arch at the south end : the voussoirs here project irregularly and a slight fall of rubbish from above them would probably displace one of them, and thus cause a further fall, and so the arch would collapse.

Some time in June, or July, or August, a fall of stones took place, when the work was not going on. It is not apparent at present in what manner the vault was reached from the outside, but it is likely that there was an entrance through the southern wall which has been described as having fallen.

About 17 ft. 9 in. below the crown of the arch at the north side is the commencement of a sloping rock-cut passage leading N.E. by E. The earth has been cleared out, and we find the passage to be 8 ft. wide and from 10 to 12 ft. high. There are several rock-cut steps for the first part of the descent, then a landing and a drop of 10 ft. (See plan 18). The horizontal length of this passage is 39 ft., the fall is 37 ft. At the bottom is a passage whose roof slopes about 5 ft. in its length of 68 ft. This passage is on plan nearly semicircular, bending round from N.E. by E. to S.S.W. Then there is a sloping passage for about 18 ft., the fall being at an angle of 45 deg., and we arrive at the top of the shaft 44 ft. deep, at the bottom of which is water led from the Virgin's Fount by a branch aqueduct of 17 ft., commencing about 50 ft. from the fountain. All these passages, canals, shafts, &c., are cut in the solid rock, the nature of which is a hard silicious chalk called *mezzeh*, except near the top of the shaft, where the rock is soft and decayed.

As yet the rubbish has only been cleared out of the staircase passage, so that we know nothing about the bottom of the passage leading to the shaft, but probably it is 10 ft. high.

It was very desirable to know how far the chasm under the vault extends, and for what purpose it was cut out, and also what there is to the south of the vault. The vault, however, was in too dangerous a condition to work under, so I arranged to fill up the chasm with the *débris* from the staircase passage. This we have already partially done. On the soil reaching the top of the staircase landing, gallery frames were fixed up through the length of the vault, and battened together, and soil filled in at the side and top, so that the men can now work to south or sink a shaft without danger from the arch giving way. I hope the arch will be filled up to the top and quite secure in a week.

We have now commenced the prolongation of the before-mentioned gallery to the south : if we find nothing in particular I shall make steps up to the surface, so that any visitors this year to Jerusalem may go and see these passages without descending a vertical shaft.

The workmen are safe so long as they obey orders, but they are like children and have to be watched continually.

I should have mentioned that the voussoirs of the arch are of *melekeh*, very much decayed and capable of crumbling on the slightest extra pressure.

It is a curious circumstance that the landing at the top of the staircase

is unconnected with any doorway or other means of exit, so that it suggests itself whether there has been a wooden bridge across the vault from the southern to the northern side, as it appears as if this chasm is of great depth, and any very temporary means of getting across would have been disagreeable with such a drop down below.

Should we find that our rock-cut canal below Bir Eyub is unconnected with that well, we may hope that it extends from and forms part of this system of passages at the Virgin's Fount. It will be observed on the plan (No. 19) that the vault comes quite to the S.E. of the canal from Virgin's Fount to Siloam, and may, therefore, very well be connected with other passages.

The work of excavation here has been going on at intervals. In May, under Dr. Chaplin's superintendence, the rock was bared for 30 ft. on the surface down towards the Kedron, and the rubbish in the passages was moved from side to side in search of other branches. The gallery along the surface of the rock had eventually to be abandoned on account of the treacherous nature of the soil. The work was resumed about a fortnight ago.

Excavations at Ophel.

Excavations south of the Haram wall have been going on since February last, principally in search of the Ophel wall. To describe the result at each shaft would only confuse the account, it may therefore suffice to say that shafts 31, 33, 37, 43, 44, 45, 46, and 47 are all in connection with the line of wall which is now found to extend as far as 700 ft. from the first tower in a south-westerly direction along the east ridge of Ophel. (Plan No. 19.)

The wall appears to be nearly in a straight line south-west of first tower, it is from 12 to 14 ft. thick, and its foundations, on the rock, slope from 2292½ at S.E. angle to 2275 at the most southerly point we have yet opened it out. There are portions of the wall which have not yet been traced (shown on the plan No. 20), but it can hardly be doubted that it is the same wall throughout.

Two more towers have been discovered, called at present Nos. 2 and 3. No. 2 is at an interval of 310 ft. from the first tower, projects 6 ft. 3 in. and is 22 ft. long. No. 3 is at an interval of 97 ft. from No. 2, projects 6 ft. 6 in., and is 28 ft. long. It is probable that we may find another tower between the first. Nos. 2 and 3 will then become respectively Nos. 3 and 4.

A striking peculiarity about this wall is that for 20 ft. on an average above the rock it is of rough rubble of moderate dimensions, then there is a plinth of well-cut stones. The plinth sets in about 6 in., and on it is the first well-dressed course of the wall. (Plan No. 21.)

As the plinth is in many places only a few feet below the surface of the ground, the wall above it is naturally only a few courses in height. In some cases there is only one course, in some four or five. These vary from 1 ft. 9 in. to 2 ft. 6 in. in height, the length of the stones averaging 2 ft. to 4 ft. Many of the stones are polished, and that generally at the angles of the towers, reminding one of the "polished corners of the

Temple." It is, however, to be remarked that in the south wall of Jerusalem polished stones are to be met with in a few places, and indeed the Ophel wall in many respects bears a striking resemblance to the present south wall of Jerusalem.

The stones in the south wall are probably not *in situ;* nor, I think, are those of the Ophel wall, that is to say, they appear to be stones used in the building of a previous wall.

There is a point to which I would draw attention. The plinth is about 20 ft. above the rock, and the inference to be drawn is that up to the plinth the wall was covered from view. Now, the wall stands on the edge of the east ridge of Ophel, the rock sloping down steeply to the Kedron, so that in order that these 20 ft. of foundations may have been covered it is necessary that there should have been an outer wall which would retain the earth up to the height of the plinth.

At No. 2 tower we have found at the plinth level the top of a tower projecting 16 ft. beyond No. 2. The stones are of a large description, having a marginal draft or bevel; the stone within the draft being rough hewn, similar to some in the Haram wall. The stones of this extra tower are from 2 to 3 ft. in height, and 4 to 8 ft. long; the face of the tower is 26 ft. It has been examined to a depth of 25 ft., that is, 5 ft. below the rock foundation of the Ophel wall, and it is of one description throughout.

At the S.E. angles of this extra tower we have found another wall going down towards the Kedron, it is 19 ft. long and then takes a turn to the S.W. We have not yet followed it farther. It has been examined to a depth of nearly 40 ft. The stones are well-dressed ashlar; in size about 1 ft. 6 in. to 2 ft. high, and 2 ft. to 3 ft. long. An isometric projection of the extra tower and the projecting wall is enclosed. It can be seen that if the *débris* were to be shovelled into the valley there would still be a scarped wall for Ophel of from 40 to 60 ft. in height, which is only dwarfed by the stupendous height of the Haram wall along side.

The method of exposing these walls is very slow and tedious. We can only get at them by mining; and to examine a wall 50 ft. high by mining it is necessary to have several shafts and galleries. We can at best get but an outline of what there is, leaving the parts of more exceeding interest to be examined minutely subsequently. We are still at work at these Ophel walls and towers. (Plan No. 22.)

No. 2 tower was discovered in May under the superintendence of Dr. Chaplin.

THE

PALESTINE EXPLORATION FUND.

PATRON.

HER MAJESTY THE QUEEN.

OFFICE—9, PALL MALL EAST, S.W., LONDON.

Reports on Progress of Works at Jerusalem and elsewhere in the Holy Land, by Lieutenant Warren, R.E.

XXX.

JERUSALEM, *November* 12th, 1868.

Robinson's Arch.—Reopened 12th November, 1868.

Birket Israel (Pool of Bethesda).—A shaft was sunk in the lower part of this pool. At 21ft. water was reached, strongly impregnated with sewage. As this is the most favourable time for examining the pool there appears to be little chance of the nature of the bottom being ascertained. Last year we only succeeded in getting down 12ft. before we reached water, but at that time the rains had commenced.

Ain el Luz'h.—The passage has been opened up 80ft. beyond N. staircase, and we are now less than 100ft. from Bir Eyub.

Vault above Virgin's Fount.—A new shaft 40ft. to south has been sunk, in order to explore the steps recently discovered. A wall running up and down the hill, west and east (6ft. thick), has been met with. At present it does not appear to be the outer city wall of Ophel.

Ophel.—Below the massive wall of the extra tower the rock is found to be scarped for about 30ft. The details are interesting, and will be given when the shaft is completed.

The wall going down the hill at shaft 47, beyond the extra tower, has been examined. The shaft is 76ft. deep. The wall was met with at 12ft., and, therefore, a height of 64ft. is exposed. This was probably from 90 to 100ft. in height.

It is now a matter of considerable moment to discover whether the rock scarp of Ophel is continued up to the Haram Wall east.

Shaft 44. This work was in order to test the continuity of the wall of Ophel. 37ft. of wall was exposed.

Shaft 49. Tracing wall of Ophel.

Shaft 50. Ditto.

XXXI.

WORKS IN PROGRESS.

JERUSALEM, *November 21st*, 1868.

Robinson's Arch.—A description of the work was given August 22, 1868; circumstances have caused the works to be closed until November. The rock-cut aqueduct has been examined to the south, and a gallery driven round the pool without finding any outlet; a second gallery was then commenced at a higher level in the pool. After a few feet the earth above us gave in and we found ourselves in a rock-cut chamber, nearly circular, diameter 16ft., roof flat; a vacant space, 6ft. in height, the pool being 14ft. 4in. high, and filled in 8ft. 6in. with silt.

The rock forming the roof of the pool appears to be from 2ft. to 3ft. thick.

To the South an outlet was found, nearly filled up, cut in the rock. On creeping through we found ourselves in an arched passage, 11ft. high (when cleared of silt) and 3ft. 9in. wide; the sides being cut in the rock and the roof composed of an arch of six voussoirs, slightly pointed in shape. This passage extends as far as the S.W. angle of the Haram, when it turns to east, and is succeeded by a smaller passage of masonry, also arched with five voussoirs. After running about 40ft. along the base of the south Haram Wall it suddenly turns to south and its character alters into that of a drain about 2ft. wide, roofed over with flat stones. The length of the pier to west of Robinson's Arch has not been ascertained. It is close on 52ft., and the southern end is exactly opposite to that of Robinson's Arch (see Plan No. 25). A gallery is now being driven round the southern end of the pier to examine the fallen arch more thoroughly.

Birket Israel.—A piece of the cement at the bottom has been got up. It is very hard. The water is 3ft. 6in. deep at the bottom of the shaft.

Shafts numbered 45, 47, 52, 53, 50 are still at work examining the Wall of Ophel.

The shafts at Virgin's Fount and Bir Eyub are progressing.

XXXII.

SOUTERRAIN NO. 2, CONVENT OF SISTERS OF SION.

December 2nd, 1868.

An important discovery has been made lately at the Convent of the Sisters of Sion (see plan No. 26).

In extending the buildings to the east a second souterrain was found. Through the kindness of M. Ganneau, the French Vice-Consul, and with the permission and aid of M. l'Abbé, I have made a plan of it. It is to the north-east, and parallel to that which has already been described in Captain Wilson's notes.

We entered from an opening in the crown of the arch, and descending 12ft. found ourselves on the top of a mound of rubbish which had fallen in from above.

At the end, to the north-west, the vault is 20ft. wide, and is filled up

with rubbish nearly to the springing; the end is blocked up with a masonry wall of a later date than the arch itself. The arch appears to be semicircular, and has about thirty-one voussoirs; at 11ft. down on western side is a communication with Souterrain No. 1, 7ft. wide, and the pier or wall between the two is 5ft. 9in. thick. On the eastern side of Souterrain No. 2, at this end, the arch appears to spring from the rock.

This arch in Souterrain No. 2 continues 45ft. to south-east, and the vault then widens, and the succeeding arch is 24ft. span, and the line of springing has a slope to south-east of about one in six; the crown of the arch apparently remaining horizontal as the arch increases in span throughout its length of 36½ft. The vault is now continued by another arch whose crown is about 4ft. 6in. lower, and whose length is 46ft. These two latter arches appear to be very slightly pointed; they are very nearly semicircular. The Souterrain No. 2 is thus 127ft. long, and from 20ft. to 26ft. across. The south-eastern end is cut off by the same line of scarped rock which closes No. 1. Also, I believe that the springing of the arch to east throughout its length is on the rock. For about 75ft. the souterrain is a pool of water about 6ft. deep with a bottom of soft mud, the water coming up to about 2ft. below the springing. We had to construct a raft, floated with inflated goatskins, to enable us to examine this portion of the vault; and I do not feel confidence in some cross measurements taken at the farther end, which I have not given on plan. I purpose going down again and examining the place more minutely. M. l'Abbé has offered every facility for our thoroughly exploring it.

It is desirable to examine the arch to north-west to see if it is continued.

I also visited, with M. Ganneau, the Souterrain No. 1, and found that the passage explored last year, 28th October, was comparatively dry, and we could get to the end on planks, but there was nothing new to be seen. The staircase close to this passage was in some way connected with the latrines of the Serai: it has been blocked up, and consequently the amount of sewage now oozing into the place is very inconsiderable.

A great portion of the side of the Souterrain No. 1 to west is rock, and I hope to be able to ascertain what it is throughout the entire length. At present it appears that the place is a deep fosse cut in the rock about 50ft. wide and 165ft. long.

XXXIII.

WORKS IN PROGRESS.

JERUSALEM, *December 8th*, 1868.

IMPORTANT DISCOVERY NORTH OF THE PLATFORM OF THE DOME OF THE ROCK ("MOSQUE OF OMAR").

On Saturday I went over the Haram Area to see if I could trace any resemblance between the Plan in Dr. Lightfoot's "Prospect of the Temple," and the present form of the ground. On passing by the

northern edge of the "Mosque of Omar" Platform, I saw that the earth had been lately disturbed at the foot of the eastern steps, and on asking the Sheikh of the Mosque about it, he said that after the heavy rains, three days before, the ground had given way, and that they had found an entrance to substructions as large as those at the South-East Angle. I suggested to him that the hole had been badly filled in, and that it would probably give way again. This morning we went early to the Haram Area, and happened to come upon this place just a few minutes after the hole had opened a second time. We went down into it and made an examination.

It is a souterrain running east and west in the line of the northern edge of the Mosque Platform (see plan No. 27). It consists of an arched passage of 18ft. span, with bays to the south of 12ft. by 17ft., arched over; the piers between being 3ft. 6in. thick. The southern side of these bays is scarped rock, and on it the wall supporting the northern edge of the Mosque Platform is built. Portions of the piers are also scarped from the rock, which appears to shelve down rapidly to the north; so that, if the earth and these vaults were removed, the northern end of the Mosque Platform would present the appearance of a perpendicularly scarped rock, with excrescences on its face, 3ft. 6in. thick, 12ft. apart, and projecting about 6ft.

The vault was examined for about 70ft. east and west, and four bays were surveyed. The crown of the arch of the vault and also of the bays is about 2ft. below the surface of the ground, which is there about 8ft. below the level of the Mosque Platform; the distance from crown to springing of the arches is 9ft. 6in., those (arches) of the bays being perpendicular to, and forming groins with, that of the vault. The arch over the vault has a span of 18ft., but it is not semicircular. It appears to have a parabolic curve; while the arches over the bays are decidedly pointed (spans from 12ft. to 13ft.)

The voussoirs of the arches are small, presenting about 15in. by 4in. on the soffit.

On the northern side of the vault I could see no appearance of rock, except in one place for about 5ft., where there is either rock or a large stone, the top of which is about 10ft. below the springing; the northern portions of the piers are also of masonry, but from their centres to their southern ends they are cleanly scarped from the rock, just as is the southern end of the bays.

The masonry in the walls is of very miscellaneous character, in some cases large and small squared stones, and in some places coarse rubble. On the northern side of the vault are two passages, about 2ft. wide and 6ft. high, which are blocked up after about 8ft.; they have the appearance of being in connection with other vaults to the north; they are roofed over with stone slabs.

To east and west the souterrain is blocked up with rubbish, fallen in from above; but it appears to extend in both directions, though towards the west there is an indication of a portion of the arch having given way. To the south the rock rises to about the springing of the arches, that is

to say, to about 12ft. from the surface of the ground, or to about 18ft. below the Mosque Platform. Above the rock, the ends of the bays are filled in with coarse rubble, and it is doubtful whether they extend beneath the Mosque Platform. In the eastern bay there is an arched doorway, or communication, which is filled up with coarse rubble.

The souterrain has no appearance of having been constructed for a tank, there is not a sign of plaster about, and the rock appears to have been scarped for view; it differs in most respects from the tanks in the Haram Area, and was apparently built for the purpose of raising up the Haram Area to a general level. The arches appear to be Saracenic. For several months I have been seeking an opportunity to examine the ground on the northern side of the Mosque Platform, near the western steps, as I am convinced there are vaults there (from the hollow sound of the ground), and my impression now is, that the souterrain just discovered extends all along the northern edge of the Platform.

I do not see that the souterrain supports the position of the Temple, obtained by the application of Dr. Lightfoot's plan to the existing plan, as sent home by the mail. It may with reason be claimed by one party as the ditch on the northern wall of the temple, and by the other as the northern ditch of Antonia. It, however, limits the space on which the temple could have stood, and as other knowledge is gained it may become a strong point in settling the matter.

N.B.—The scarped rock was only visible to a depth of 12ft., but there was no indication of any termination.

XXXIV.

WORKS IN PROGRESS.

December 22nd, 1868.

A shaft was commenced, Nov. 14, 1868, at about 20ft. S.E. of S.E. angle of the Haram Area. The *débris* sunk through is composed principally of stone chippings, alternating with layers of fat earth, and in some places rough stones about a foot wide. On arriving at a depth of 53ft., a gallery was driven in to the Haram Wall, passing through two rough masonry walls running respectively N. and S. and E. and W. The gallery reached the east wall of the Haram Area at about 6ft. north of the S.E. angle, and three letters in red paint were found on one of the stones.

A gallery was then driven to the S.E. angle, and a shaft sunk; another character in red paint was found on the wall while sinking this shaft.

The result of the examination of the wall at this point is as follows:—The rock is about ten feet lower than it was found to be at sixteen feet west of the S.E. angle. It is very soft and much decayed, but it appears to be mezzeh. The corner-stone is apparently let into the rock about two feet. This stone is well dressed, and has an ordinary marginal draft at top of about four inches. It appears above the rock for about two feet in height. The stone in the next course is four feet six inches in height. It has an ordinary marginal draft at

bottom, but at top the draft is only one inch wide. This stone is very roughly dressed within the draft. The next, a third course, is four feet in height, and has at bottom a draft of four inches and a-half, but no draft at top. The character which I enclose lies on that part where the draft should be.

The fourth course is three feet nine inches in height; it has a small draft of nine inches at top. The stone is on this account different to any that are to be seen above ground.

The fifth course is similar in every respect to the best specimens of stones found at the S.E. angle above the surface; the course is three feet eight inches in height, and on the second stone from the angle are the three letters.

These stones are all in the most excellent preservation, as perfect as if they had been cut yesterday. They are very well dressed, but, except in the instances I have mentioned, differ in no wise from the perfect specimens above ground.

The marginal drafts, and about two inches round the projecting surface, have been picked over with an eight-toothed chisel, about eight teeth to the inch; within this, a "point," a single-pointed chisel has been used.

The letters or characters are in red paint, apparently put on with a brush; the larger letters are five inches high. There are a few red splashes here and there as if the paint had dropped from the brush. The general impression resulting from the examination of these marks is that they are the quarry marks, and were made before the stones were placed *in situ*. If this be the case, then the stones must have been dressed previously to their having been brought from the quarries.

The *débris* resting against the wall at this point is composed of stone chippings, intermixed with some black stuff looking like decomposed or charred wood. The layers of the *débris* slope in towards the Haram Wall, instead of away from it.

The colour of the paint is apparently vermilion; it easily rubs off when touched with the wetted finger.

Dr. Petermann (the Prussian Consul) considers the characters to be Phœnician. The Rev. Dr. Barclay considers that we may safely conclude them to be Hebrew.

THE

PALESTINE EXPLORATION FUND.

PATRON.

HER MAJESTY THE QUEEN.

OFFICE—9, PALL MALL EAST, S.W., LONDON.

Reports on Progress of Works at Jerusalem and elsewhere in the Holy Land, by Lieutenant Warren, R.E.

XXXV.

JERUSALEM, *December 28th*, 1868.

Birket Israil.—On 12th November I related to you that in sinking a shaft in this pool we had come upon filthy water, and had been obliged to discontinue the work on account of the foul smell arising. After a few days had elapsed I had this water baled out, and found that the fresh water which streamed in again on all sides was comparatively clean and pure. By feeling with a jumper, the water was found to stand at a height of 3ft. 6in. above the bottom of the pool, and as the *débris* we had to go through was a mass of loose stones, through which the water flowed freely, it was a matter of some difficulty to get a look at the bottom, because it was not possible to get the water out fast enough to enable us to fix in frames one by one; after some trouble, the space between the last shaft frame and the bottom of the pool (about four feet) was cleared out, so far as the stones are concerned, and then a small coffer dam was let down; it consisted of four shaft frames screwed together and rested on the bottom of the pool; clay had been got up for the purpose and was puddled in behind the frames on all sides; the water was then baled out and the bottom of the pool was exposed.

It has a hard smooth surface, evidently for the bottom of a reservoir; on breaking through, we found first a thickness of plaster, 2½in., very hard and compact, composed of cement and broken pottery; then a kind of concrete, consisting of alternate layers of small stones and mortar, to a depth of 1ft. 4½in. The plaster and concrete was exceedingly hard, so much so that only small pieces could be broken off with the jumper; we were obliged therefore to have recourse to blasting, and as the water trickled slowly into the jumper holes, the charges were put in glass bottles and rendered water-tight.

We soon had a hole, about 2ft. square, made through the concrete, and there was exposed a surface of hard stone (mezzeh), either the rock or a large paving-stone, apparently the former; a jumper hole 10in. deep was driven into this stone, but it would have been very difficult to have gone deeper without disturbing a greater surface than our dam covered. I had the shaft partially filled in and drove a gallery from it at a depth of 9ft. to the south wall of the pool. There we found the plaster and lining stones precisely similar to those which are seen above and which are fully described by Salzmann.

Specimens of the plaster and concrete from the bottom of the pool are now ready to be sent home.

The shaft sunk was 20ft. from the south side of the pool, and 158ft. from the eastern end; the top of the shaft was 60ft. below the Haram Area level. At the northern end, the depth of shaft to the bottom of the pool was 24ft. 6in., so that the bottom of the pool is at a level of 2,325ft. above the Mediterranean. As a result of the examination, we find that the bottom of the pool, at least in one point, is (or rather was) in perfect preservation, that the pool is upwards of 80ft. deep, and that there is in it an accumulation of stones, refuse, and sewage averaging a depth of 35ft. Should the city be again rendered wholesome and inhabitable in summer by the enforcement of proper sanitary regulations, it would be necessary to remove the rubbish from this pool, and then the Birket Israil, at the expense of rendering the sides sound, might again serve as a reservoir for water.

The results of the examination with regard to settling the question of the position of the rock about the pool are not satisfactory; at the bottom it appears to be rock; but at the side, where the gallery was driven, it appears that the rock is wanting, otherwise it would not have been necessary to build up the side with large stones.

If the side of the pool to the south is not cut out of the rock, then we have the Haram Area at this point elevated to a height of 100ft.: and the question arises whether this 100ft. is *débris* (and most interesting *débris* it would be), or whether it is composed of substructions similar to those at the south-east angle, and in continuation of those we have lately found at the north end of the Mosque Platform.

Again, on the east side of this pool, we have the Bab Sitti Mariam, generally called St. Stephen's Gate; are we to suppose this gate elevated 100ft. above the bottom of the wall, or does the rock break down suddenly from the gate towards the south, so as to form a deep gorge in which the pool is built? in this latter case, how far does the ravine extend from the S.W.? does it come down from the Damascus Gate and pass south of the Serai, and so join the valley from the north at the site of the pool? These are points to which considerable interest must be attached.

I find that the rock, to the north of the Birket Israil, crops up at the side of the Church of St. Anne, at a level of 2,410ft., and that at the gate leading to this church from the Via Dolorosa, no rock was found at 36ft. from the surface (2,405ft.)

There is a question also with regard to the two arched passages leading from the west of the Birket Israil; the crowns of these arches are on a level with the top of the pool, and it seems hardly probable that the piers will extend to the

bottom of the pool without a second series of arches midway; if, on the other hand, the passages do not reach to the bottom of the pool, it would be interesting to know whether they are built up on *débris* or on rock: a shaft is now being sunk under one of the arches, but the owner of the ground is a little diffident about our working there, and may place obstacles in the way.

On January 1st, 1869, the garden, north-west of Birket Israil, on the other side of the road, was examined; and an entrance to a cistern found at 61ft. north of the Via Dolorosa, and 33ft. west of the road leading north from Bab Hytta (see Ordnance Survey Plan, $\frac{1}{2500}$, the contour line 2,419 passes through the garden). The height of this entrance is 2,421ft., for about the first 20ft. down there is a shaft 2ft. wide; below this it opens out to west to about 8ft., and at 36ft. is the rock, forming in part the roof of a small chamber or cistern: this chamber is cut in the rock, and is filled up within six feet of the top with mud: close to the shaft already described, is a parallel shaft, giving the impression that water was obtained from this chamber by means of a *n'aura* (water wheel).

It remains to be seen in what manner sufficient water could have been got into this chamber to cause a water wheel to be necessary for lifting it; if practicable, a shaft will be sunk through the mud at the bottom of this chamber.*

January 1st, 1869.

Rock-cut Passage at 'Ain el Luz'h.—The passage was followed up until 170ft. from Bir Eyub, where another staircase was found, the steps of which are in very good preservation: the passage was then continued to north, for upwards of 100ft., until 12th December, 1868, when a heavy downpour of rain stopped the work, Bir Eyub overflowed, and the rock-cut passage was filled up with a stream of water, which found vent by the two lower staircases.

The rain fall in December of 1868, was much greater than usual; up to 15th of the month, 8·703 inches had fallen, and it is interesting to find that the overflowing of Bir Eyub is due, not so much to a steady long continuous rain, as to a sudden heavy fall.

It is now nearly certain that the rock-cut passage does not communicate with Bir Eyub, as we are only 70ft. to south of it, and at least 70ft. to west.

January 2nd, 1869.

Arak el-Emir.—I have got over from Arak el-Emir (Palace of Hyrcanus) the capital of a pilaster shown in de Saulcy's "Voyage en Terre Sainte," vol. 1, page 229: it weighs about 3 cwt., but as the back is all rough it might easily be reduced to 1 cwt. Will you let me know whether the Palestine Exploration Fund wish to have it for the new museum?

Khureitun.—Last Tuesday I accompanied Dr. Petermann and party to the Cave Khureitun, west of the Frank Mountain, the traditional Cave of Adullam.

We went in search of the passage described by Dr. Tobler, in which he found some sarcophagi and Phœnician inscriptions. Sergeant Birtles and six

* See subsequent letter, February 1, 1869, with Plan No. 36.

fellâhs were also of the party, to excavate and examine the bottoms of the large caves.

We arrived at the cave at 10 A.M.; the Ta'amireh at first objected to our digging, but were soon quieted.

We went through to the last cave spoken of in Murray's Handbook, whence Tobler's description of the passage begins. On our way we found a passage to the left, half filled with the refuse of bats. After crawling for about two hundred feet on our elbows and knees we came to a shaft leading upwards, about 15ft. high, climbing up this we found ourselves in a passage, about 6ft. high, leading north and south: to the north we went perhaps 200ft., when the passage ends in a cave, from which, after passing a small hole, are many other passages leading in all directions. To the south we went about 100ft. and found some broken stones which had been hewn. Over a little passage to the east we saw a Jerusalem Cross smoked on the wall. Finding the time was passing quickly we returned and followed into the last cave spoken of by Murray. Here in the north-west corner is a small opening, and over it written "No outlet here," and it was in this, as far as we could understand the description, that Tobler had found an outlet. Crawling up this passage we found to be most difficult, and only to be passed in one place by lying on the side and wriggling through. After this there is a small passage for about 30ft., and then it opens into a passage running north and south, which proved to be the passage we had been in before when we had found the Jerusalem Cross. It will be thus easy at some future period to go up the first passage we explored, and thus miss the very difficult pass from the last cave; but to explore the cavern properly (if it be worth the trouble) people should encamp near the cave for a day or two. Although we got in such a little way we were at work over five hours in the caves.

There are four large caves; in the fourth and last no excavation was made.

In the third the rock was found at 2ft. 6in. No pottery.

In the second, after working through a loose brown loam abounding in pottery, a stalagmite floor 3in. thick was reached, at 4ft. 6in.; below it for 18in. was a white dust and then hard rock (melekeh). No bones.

In the first cave the stalagmite floor was reached at a depth of 7ft., the white dust between it and the rock having a depth of 15in., the 7ft. of loam was full of broken pottery. No bones.

January 2nd, 1869.

South-east Angle, Haram Area.—The heights of courses 2, 3, and 4 were given in last letter as 4ft. 6in., 4ft., and 3ft. 9in. respectively; they should have been 4ft. 3½in., 4ft. 2½in., and 3ft. 7½in.

I have carefully tested the angle of the base course and find it to be 92° 35′, while that at the surface I make 92° 5′. Captain Wilson in his notes gives the general direction of the walls 92° 50′; the eastern wall is somewhat irregular, the first 120ft. only being in a perfectly straight line (excluding the offsets), after which there are several slight bulges; it is, however, very probable that the courses below the present surface are in a straight line for the first 260ft. to the north, as in that distance the inaccuracies do not amount to

more than a foot; at this point there is a small postern on about the same level as the single gate on south side; from this postern the wall takes a slight turn to the north-east, so that in 650ft. it is about 8ft. to east of a line in production of the first 260ft. of the east wall (see Ordnance Survey Plan $\frac{1}{3\,0\,0}$).

On 2nd December I stated that at about 895ft. from the south-east angle, along the east wall, there is a break; I took this dimension from plan, but I find on measurement that it is 909ft.—only 14ft. less than the length of the south wall.

The rock at the S.E. angle into which the base course is let is very soft. At 3ft. to the east of the angle a hole was found scooped out of the rock, 1ft. across and 1ft. deep; on clearing the earth out of it, a little earthenware jar was found, standing upright, as though it had been purposely placed there.

A gallery was driven to the east from the angle for about 8ft., when the rock was found to slope away at an angle of about one in nine; this gallery was then tamped up, and a search was made around the corner stone for any means of getting under it, at ft. north of the angle close to the wall, the rock was found to be cut away in the form of a semi-circle or horseshoe, 2ft. wide and about 2ft. 8in. deep; dark mould was found in it; on clearing it out it was found that the base course rests upon very hard rock (mezzeh), the soft rock extending only to a depth of from 2 to 3ft.: the base course is 3ft. 8in. in height.

Upon the soft rock there rests an accumulation of from 8ft. to 10ft. of a clay mould, abounding in pot-sherds; this mould does not lie close up against the Haram wall, but is at top about 12in. from it, and gradually closes in to it; between it and the wall is a wedge of stone chippings; it is quite evident that when the wall was built, this 10ft. of mould and pottery was in existence, and that it was cut through, and the soft rock also, for the purpose of laying the stones on a solid foundation, and it is probable that the horseshoe hole cut in the rock (above mentioned) was for the purpose of allowing the tackle to work when lowering the corner stone into its bed. The pottery found in the clay is broken up into fragments, and no shapes can be recognised; a long rusty iron nail was however found. As this is the weather side of the Haram Area, and as there is such a deep valley below, the *débris* about here is less damp than in the Tyropœon Valley, and there is a much better chance of any articles being preserved in it. One would expect amidst all the chipping to find some broken tools, or something of that sort; and it is most remarkable that nothing ever turns up of importance.

The layer of clay mould slopes to east at an angle of about one in four, the layers of stone chippings, &c., above, at an angle of one in three. I find that the point where the layers slope down towards the wall is merely local, and that the general slope is towards the east. A gallery has been driven along the second course to north; the first stone is very roughly dressed, and is 10ft. 6in. long; the second stone is 4ft. 9in. in length; it is well dressed and has the usual style of bevel; at about the centre is a deeply engraved mark, like the Greek H, only that the horizontal line is about one-third of the way up the upright lines, it is cut in above ¾in.; on the south lower corner is another engraving (see Plan No. 29); about the stone are many flourishes with red paint, but whether they are monograms or merely "fantasia," it is difficult

to say, and in black paint there is a mark (Plan No. 29); the stone, shortly after it was uncovered, began to exude moisture, and it would not be prudent to take a squeeze of the two engraved marks until the paint is dry, as it easily rubs off.

We are also driving a gallery along the wall to the north at a higher level, baring courses 4 and 5. Two more characters in red paint have been uncovered; the first (see Plan No. 29), and the second simply a round O.

It is curious that the third stone in the fifth course is very roughly dressed within the bevel. It does not appear that these rough stones form any pattern on the wall, and one is almost led to suppose that the builders were unable to find suitable dressed stones for breaking joint, and had to take those that were unfinished.

There is a most beautifully dressed stone in third course, but, as it is between the two galleries, it would be dangerous to examine it just now.

On examining the chippings at the base of the wall, I find they are in many cases rounded and unlike what would result from stone dressing, having more the appearance of the backing used in the walls at the present day in Palestine. Close up against the wall is a small quantity of chips, but nothing to prove that the stones were dressed after they were laid; and the fact of the horizontal bevels in adjoining stones being altogether unlike is of itself sufficient to lead one to suppose that the stones were finished at the quarries.

The third stone to north on second course was uncovered last night, and on it are found, in red paint, the marks (as in Plan No. 29). This stone has no bevel at top, but a bevel of 13in. at bottom. The marks have been very hastily sketched.

January 2nd, 1869.

Neba.—Robinson, in his list of places in el-Belka, south of es-Salt, gives "Neba (Nebo?)."

M. de Saulcy appears to have been the first to discover the site of Neba, on 13th April, 1863 (see "Voyage en Terre Sainte," p. 289). When passing over the Belka, between Hesban and Ma'ain, he was pointed out "Djebel-Neba" to his right, and the following day (14th April) he passed "Ayoun-Mousa, Sources de Moise," at its foot.

It appears from the plan, published in 1865, that the Duc de Luynes camped at "Ain Musa" on 13th and 20th April, 1864, and that he ascended Neba, which he calls "Djebel Musa."

On 30th April, 1864, only ten days after the visit of the Duc de Luynes, these springs were visited by the Rev. H. B. Tristram, F.R.S., who refers to them in his speech, 11th May, 1867, at Cambridge. Mr. Tristram also ascended Neba, and gives a graphic description of the view from it in "The Land of Israel."

The discovery, then, appears to have been made independently by at least two of these three gentlemen, and, to a certain extent, the results differ in detail.

M. de Saulcy places the springs to the south of Neba; but, as he only *saw*

Neba, and came to the springs after making a long detour round by Ma'ain, he may easily be in error in the location of the two with reference to each other.

The Duc de Luynes places the "spring" (he calls it 'Ain) to the north of Djebel Musa (Neba); and Mr. Tristram does not mention the two with reference to each other.

I found (22nd July, 1867) the Ayoun Musa situated in a ravine to the north-west of Neba. South of the springs, and west of Jebel Neba, I found extensive ruins of the same name; they consist of a confused heap of stones, 300 yards from east to west, and 100 from north to south, lying on a spur of Jebel Neba. There are scattered about the remains of several columns and cornices; also the remains of a temple, 70ft. in length, and some vaults beneath. We descended into these vaults. They are divided by piers 2ft. 3in thick; arches 16ft. span, and 6ft. rise; the arches are 1 foot thick, and are paved over with flagging 18in. square. This paved place is west of, and in some connection with, the temple. We also found the appearance of a city wall. The stones about were very much worn.

In the vaults we found the remains of four women and those of some children who had apparently been murdered and thrust down these places.

Jebel Neba is a hill (see photographs 301, 302) on the edge of the swelling ground round the west end of the Belka. It can be seen from the wadies Hesban and Keferein, and from near Tell Keferein it appears as a lumpy hill above the high lands; it is 400 feet above the ruins of Neba, and about one mile and a half distant; it is about 2,670 feet above the sea level (Mediterranean), and is therefore close on a level with the Mount of Olives.

To the north of Neba there is no hill of equal height, overlooking all the plain of the Jordan, until we come to Jebel Husha, though to the north-east the ground rises 200 ft. above Neba.

From Jebel Husha to Jebel Atarus there is not a point which commands the high lands on the west of the Jordan.

In the wady, forming the northern boundary of the Jebel and ruins of Neba, are the springs of Moses. They gush out of the limestone rock, and are numerous; the highest and lowest differ about 100ft. in elevation; the lowest being about 1,100ft. below Jebel Neba. The wady is a ravine broken up by precipices (see photograph No. 301), the water from the springs running down in a succession of cascades of about 20ft. to 30ft. in height. Several of the springs issue from small caves, where the water lies in basins 3ft. to 4ft. deep.

This wady can be seen from Neby Musa, on the west side of the Jordan; and as points from which you can see a distant holy place are venerated among the Mahomedans, I have to suggest the question whether this Neby may not have originally obtained its sanctity from the people having been able from that spot to see up the ravine of the Springs of Moses.

In many places on the east of the Jordan we found piles of stones marking spots from which Neby Musa could be seen.

If there happened to be one spot on the eastern bank from which Neby Musa could be seen, and if it were difficult for any number of years for the Bedouins to cross the Jordan, is it not probable that in course of time this spot would be looked upon as the true Neby?

On this principle, in default of a better argument, may we not suppose that originally Neby Musa was the spot from which the Ayûn Musa could be seen, and that, when in process of time it became difficult and *inconvenient* to cross the Jordan, the Mahomedans were content to accept the shadow for the reality?

XXXVI.

JERUSALEM, *January 12th*, 1869.

Robinson's Arch.—In my last account of the excavation at Robinson's Arch, I told you that we had followed the rock-cut passage to the south, and had found a circular rock-cut cistern, and from thence an arched passage leading to east towards the lower part of the Tyropœon Valley. We have since found that the first 30ft. of our gallery was driven along the bottom of an aqueduct 13ft. 6in., and about 3 to 4ft. wide, arched over at top. As our galleries are at most only 4ft. 6in. in the clear, we did not find this out until lately, and now we have been able to knock down the silt from the top to the bottom of the aqueduct, and have been able to recover all our gallery frames, having an arched roof over our heads. Just where we happened to get through into the aqueduct, two large stones have fallen and smashed in the arch, of which there is no appearance for some feet north and south. These two large stones are over 4ft. cube, and appear to be voussoirs of an arch which spanned the gallery previous to the building of the arch, the fallen voussoirs of which are to be seen resting on the pavement 20ft. higher up.

Waiting to hear from you with regard to this aqueduct to the south, I have opened it to the north, and for 50ft. it runs in a straight line 10° more westerly than the west Haram Wall. We have just found that this part of the aqueduct is also arched over (3ft. 6in. wide), and part of the way the arch is most peculiar, it has the appearance of having been pressed in on the western side; but, on examination, I am inclined to suppose it was built as it now remains. It has five stones, and is in the form of a skew-pointed arch, the chord to east being about 22in. with two stones, and west 33in. with three stones; it has a very comical appearance. Beyond this part of the aqueduct, we find another circular rock-cut cistern, about 14ft. 6in. in diameter, and beyond it a rock-cut passage for 10ft., where it branches off right and left: to the right it opens into another rock-cut circular cistern, which is *half cut through* by the west Haram Wall (see Plan No. 28); and on the left it bends again to north, and is connected with a long straight-arched passage, about 3ft. to 3ft. 6in. wide, arched over, and running about 120ft.; that is to say, about opposite to the Bab al Magharibe (Barclay's Gateway).

We cannot clear it out without great trouble, and I wish to hear from you on the subject. It is choked up with silt on the northern end.

The fact of one circular cistern being cut through by the Haram west Wall, and

also a passage south of the bridge being cut in the same way, leads one to the conclusion that this aqueduct existed before the west wall was built. It is quite evident that this aqueduct was for running water, partially for the supply of houses or gardens in the Tyropœon Valley, as every few feet we met with shafts for lowering buckets, quite similar to those found in the older portion of the aqueduct leading from Solomon's Pools (described 2nd September, 1867). The presumption is, that when the Haram Wall west was built, the part of the aqueduct lying west of the wall was left intact, but that when the wall cut through it, straight lines of arched passage were built to connect the older portions.

To the west of the circular cistern to north of Robinson's Arch, some curious rectangular chambers have been opened; they are cut in the rock (about 16ft. by 6ft.) and are arched over (semicircular), in one is a flight of steps leading apparently nowhere. In one of these chambers we found the base of a column which had fallen in through a hole in the roof, a sketch of this column has been forwarded, we have also found several curious rock-cut passages about 2ft. square, the object of which is not apparent.

Presumptive Evidence.—1. The winding rock-cut aqueduct was constructed.

2. The west Haram Wall was afterwards built, and part of the aqueduct falling on the inside of the wall, the outside portions were connected with arched masonry passages, and the rock-cut parts were at the same time arched over. At the same time a bridge was built connecting the Haram Area with the western side of the valley.

3. The arch of the bridge fell (two voussoirs still remain), smashing-in part of the arch of the aqueduct.

4. *Débris* began to fill up the valley, a pavement was constructed upon it, which still remains, about 20ft. above the top of the aqueduct; in order to obtain water readily shafts were constructed at intervals from the pavement down to the aqueduct.

5. The arch fell and now rests upon the pavement.

6. *Débris* began to fill up the valley over the fallen arch, the pier of which standing out was removed all except the three lower courses.

7. Houses were built on a level 20ft. above the pavement.

8. These houses fell into ruin and the *débris* accumulated to its present level, viz., 45ft. above the pavement.

Pool of Siloam.—On the road leading from Burj al Kibryt to Pool of Siloam, about 400ft. from the latter, water was observed, during the heavy rains, to disappear rapidly through a hole in the ground; an excavation was commenced 15th December last, at 9ft. 6in.; a pavement of stone flagging was found and a small water duct 3in. square. This duct was followed to south-west for about 26ft., when it was found to run into a rock-cut tank, 12ft. square and 15ft. deep; roof of rock.

The gallery passed through the remains of an oven composed of large fire bricks.

A piece of fine white marble belonging to the capital of a Corinthian column was found in the shaft.

Birket Israil.—The floor of the northern arch is found to be 36ft. 5in below the crown, that is to say, 48ft. above the bottom of the pool; the work is still in progress.

Extra Tower and Wall of Ophel.—This tower (previously described) was found to rest upon rock, which is so scarped as to overhang 18in. at top (see Plan No. 30). There is a perpendicular scarp of 14½ft., and then a small gutter for water; below this the rock is cut away so as to form a water channel, 10ft. high, and about 18in. wide, open at the top. This channel was found to be too narrow to follow up. The rock scarp was traced to N.N.E. for about 25ft when the rock was found to be wanting, a rough wall taking its place.

With regard to the extra wall beyond the tower, it is found to be at present 66ft. in height and 80ft. in length; at its southern end it turns to west towards the Ophel Wall, and becomes so much decayed that further excavations about it were considered undesirable; it is partially plastered on the outside, and so likewise are the large bevelled stones of the extra tower.

The Ophel Wall has been traced for 700ft. S.S.W. of the first tower, it then ends abruptly; it is in a straight line, but the line is broken by the projections of the second and third towers. About 200ft. south of the point where the wall ends, and in the same straight line, some massive walls have been uncovered; they have been built over subsequently, and it would be very difficult to determine their original objects: at this point there is a rocky knoll, and the earth is only about 12ft. in depth. Looking at the remains from a professional point of view, I am inclined to think that what we call the Ophel Wall, was here terminated by a tower, placed on the rocky knoll, and that from thence the wall ran up towards the Dung Gate. (Plan 30.)

We have found, however, no trace of the wall within 200ft. of the rocky knoll, but it is exceedingly unlikely that the wall would terminate in a hollow with rising ground a few feet in front of it; as the earth about here only covers the rock to a depth of from 12 to 15ft., it is possible that the wanting portion of the wall may have been taken up and sold for building stone by the fellahîn, who at the present day frequently go down to that depth in search of cut stone. Cut stone in Jerusalem is much in demand, and on the grounds of the fellahîn, all traces of walls at or near the surface are fast disappearing; the rock-cut steps and caves which existed along the slopes of Ophel are also fast becoming obliterated, the farmers find that these are the places where they have least trouble in blasting and quarrying the rock, and within the last few years many old features on the southern side of the old city have vanished; thus year by year the old Jerusalem will become more difficult to be understood.

It appears likely that the Ophel Wall was built in two or more steps, with a road at the bottom of each wall, as we find that in the first wall the stone is roughly dressed to a certain height above the rock, and that to this height there is an outer wall of cut stone about 20ft. to the front of it.

XXXVII.

February 1*st*, 1869.

Curious gateway and chamber, 50ft. below the top of the great causeway of Tarik Bab es Silsile.—Uniting the upper part of the city to the Haram Area at Wilson's Arch, is a great causeway which we have lately discovered to be a succession of vaults upon vaults; and I have now to relate a further curious circumstance relating to this matter. The causeway at its eastern extremity (Wilson's Arch) is elevated about 80ft. above the bottom of the rock on which the west side of the Haram Wall is built, and is about 26ft. above the present level of the ground at the same point, that is to say, the level of the Haram Area is 2,420, the present surface of ground (Jews' Wailing Place) 2,394, and the surface of the rock 2,340ft. above the Mediterranean.

On 2nd September, I told you that we had been unsuccessful in our endeavours to explore the secret passage under the great causeway further than 250ft. west of Bab es Silsile, or Wilson's Arch, and that we found it to run immediately under the street of the same name (Bab es Silsile), which is formed from the upper part of the causeway. At 220ft. from the Haram Wall the passage is terminated abruptly by a comparatively modern wall, and an opening to the south leads into an ancient vault, and further on into a place used as a donkey stable. On examining farther west we found the passage as far as 250ft. from the Haram Wall; it is here used as a cistern, and is under the house of Joseph Effendi. The Tarik Bab es Silsile, or upper part of the causeway, is up to this point from the gate of the same name nearly on a level, that is to say, it is about 2,422ft., and the level of the secret passage is, at the springing of its arch, nearly on a level also, about 2,410ft., the crown of the arch being about 8 to 9ft. below the level of the street above it: it is exceedingly difficult to level through a succession of vaults underground, with the earth nearly up to the crowns of the arches, and I cannot be certain of these levels to a foot either way. The continuation of the secret passage beyond the tanks has not yet been found, but in examining the place a curious chamber and gateway has been found at a lower level. (See Plan No. 31.)

The portion of the secret passage (shown A on section) used as a tank opens from a vaulted chamber (H) on the southern side of the causeway, and a little to the east of the production of the street El Wad: it is shown on the plan of this causeway sent home 2nd September. (Plan No. 17.) In this chamber (H) Joseph Effendi told me he had found the mouth of a cistern some years ago which had been covered up with refuse from the house; the present floor of the chamber (H) is on a level with the springing of the secret passage A. It took some time to find the mouth of the cistern in question, as it is over six feet below the present bottom of the chamber; and when found it was a question whether it could be descended. It consists of a shaft, for 25ft. below the bottom of the chamber, so narrow that we could not use our legs for getting up the ladder; and it was found at last that the only way it could be managed was to be hauled up by the rope about a foot at a time, and then the strain on the rope from the friction of the body against the sides was very great. Having arranged for our ascent, we descended, and found the shaft

to open through the crown of an arch into a chamber (B) running east and west, and about 4ft. to the south of the secret passage above. The crown of the arch of this chamber is 13ft. 6in. below the bottom of the cistern A (in which there was water) and 40ft. below the level of the street above. This chamber is 14ft. 6in. in length, 8ft. broad at the western and 10ft. 6in. at the eastern end. It is plastered. Its roof is peculiar, it is a straight-sided pointed arch, the rise at the widest part is only 2ft. At the western end of the chamber a hole was made in the masonry, but after going 4ft., damp earth was met with and no signs of the continuation of the chamber. We had to be very careful, as in case of our breaking through to water there would have been a difficulty in getting up the working party through the shaft in safety. The *débris* was next cleared away, and a hole made in the wall, when it was found to be a doorway, closed up, which leads into chamber C.

This chamber is very peculiar; it has apparently been used as a vestibule or guard-room to a postern at its eastern end. It runs east and west, is 18ft. long, and like the first chamber B, it is wider at its eastern extremity, being 12ft. to west and 13ft. 9in. to east. There is no plaster about this chamber. The arch is nearly semicircular and the courses are 19 in number, of nearly equal dimensions. At the eastern end there is a semicircular arch of 5ft. span, resting on a lintel 12ft. long and 2ft. high; this lintel forms the top of a doorway whose height was not ascertained. This doorway, 5ft. wide, leads to a passage only 2ft. 6in. wide, and covered over with blocks of stone laid horizontally. At 10ft. to east there is the appearance of some building having given way and fallen into the passage, and I considered it prudent not to meddle with it.

It will be seen on inspection of the plan and elevations of this chamber that the gateway at the eastern end is of a description only likely to be used as the entrance to a passage, and it will also be noted that the gateway to west is peculiar.

In the chamber C a volute of an Ionic capital was found, a sketch of which has already been forwarded.

It is not very clear whether this chamber C was constructed at the same time as the causeway or previously, but in either case it would appear to have been a means of getting from the upper city out into the Tyropœon Valley.

It will be interesting to ascertain where and on what level the present main drain crosses the causeway on its way down to the Dung Gate. I have not been able to get any authentic information on the subject.

The Gate Gennath (so called).—H.R.H. the Archduke, Duke of Modena, through the Austrian Consul, Count Caboga, expressed a wish that we should re-examine the Gate Gennath (so-called), and he gave a donation in furtherance of that object.

On Thursday week a shaft was sunk down alongside the northern end of the gateway, and the arch, which is very much battered and weather-worn, where exposed, was found to be in very fair condition, immediately below the service of the road, and to spring from an impost or capital 2ft. 1in. in height; below this the doorpost is composed of three stones giving together a height of 7ft.

4in. (See Plan No. 32.) The lower stone of the doorpost rests on a stone forming a sill, which projects into the roadway and under the arch about 12in. No pavement has been found.

The arch of the gate is composed of 11 stones, 2ft. 3in. long, and also 2ft. 3in. wide at the extrados. The keystone is 2ft. 6in. in length, the extra three inches appearing to project beyond the archivolt (as shown in elevation); but of this I cannot be quite certain, as a settlement in the arch might have produced this effect. The arch is semicircular, the span being 10ft. 8in. The springing of the arch is flush with the doorpost, the abacus and mouldings projecting 3in. The impost is in good preservation; a sketch of it is enclosed.

The height of gateway from sill to top of impost is 9ft. 5in.; and adding to it the rise of the arch, we have a total height from sill to crown of 14ft. 9in. (See Plan No. 32.)

On getting down to the sill of the gateway a gallery was driven to south, when it was found that there was a second doorpost of more modern construction within the first. On getting under the centre of the arch some earth fell in, and, on its being cleared away, it was found that we were under a pointed arch. On examination I found that the gate Gennath (so called) is cased inside with doorposts and a pointed arch of comparatively modern construction, as shown on plan. This inner doorway is recessed four inches; a simple moulding (astragal) runs down the jamb, projecting four inches, so as to be flush with the front of the outer gateway. I cannot see if the moulding runs round the arch, as there is some masonry in the way. This inner pointed arch forms part of the roof of a dyer's shop; and I understand that it was under the arch inside that the first excavation two years ago was made. Except at the point where our shaft is sunk, there is masonry encasing the old gateway, and one might dig about it for a long time without getting upon the old gateway as we have had the luck to do.

The sill of the gateway (Gennath) is about on a level with the Sûk, at Biyar, and also of the floors of the two towers to west of the gate, described in Lewin's "Siege of Jerusalem by Titus," page 216.

This is not the only instance where I have found old work smothered in on all sides by more modern masonry; and it has sometimes occurred to me that the pointed arches at the Mahkama conceal more ancient arches above—certainly in two places this can be observed.

From the battered condition of the exposed portion of the gate Gennath, it is evident that a vast number of years must have elapsed since the two gateways were closed up; and as the inner gate was probably built to be used when the outer gate became decayed or distasteful in its architecture, we may safely assume that the gateway is of ancient construction, especially as its style is Roman.

South of Haram Area.—(See Plan No. 33.)—Two shafts were sunk in search of any traces of a wall running south from the west side of the triple gate. The upper shaft, No. 34, was commenced 132ft. south of the triple gate, and to the west of a cistern; rock was found at 22ft., and a drain at same level was broken into, in which were found a great number of glass bottles and earthenware lamps, which

are supposed to date from about the third century of our era. A gallery was then driven along the surface of the rock for 25ft. to the west, but no wall was found. Objections were made to our continuation of the work to the west under the adjoining property.

To the east of No. 34 shaft is a cistern in which there is a large cross (of St. John) moulded on the plaster, and also some hieroglyphs, a sketch of which was forwarded home in the spring. The cross is placed in a little alcove in the cistern, so that it would only be seen by persons looking for such marks. This cistern would appear, then, to have been plastered in the times of the Crusaders or of the early Christians; if of the time of the Crusaders, the cross would probably be that of the Templars who were quartered just above. It may perhaps be attributed to the early Christians, as we find the drain with the Early Christian pottery so near to it.

The second shaft, No. 42, was sunk at a distance of 260ft. from the triple gate, and in the production of a line perpendicular to the eastern jamb of the centre arch. Rock was found at ft.; a gallery was then driven to the west, and at 10ft. a drain was broken through, the same as was met with in shaft No. 34; also a branch drain coming from north-west; this was followed up until at 30ft. from the shaft a massive stone wall was met with, running apparently in the direction of the eastern jamb of centre arch triple gate; the wall was then followed 31ft. to south, where it becomes lost, and 35ft. to north, where it is succeeded by a wall of rubble masonry, and there lies on it (not *in situ*) a small well-cut bevelled stone about 2ft. by 3ft. 6in. The wall was then followed 10ft. farther to north, but apparently it still continues of rubble masonry; just at the point where is the bevelled stone the mouth of a shaft was found leading down to a rock-cut cavern, which will be described.

The wall is not yet examined thoroughly; one stone appears to be 15ft. long and 3ft. high (without a bevel); but there is a good deal of cement on the stones and the joints may be concealed; the wall appears to consist of one course of larger stones resting on a wall of rubble, and the impression it gave me at first was that it might be the wall of a ramp leading from the Wall of Ophel up to the triple gate; I shall perhaps be able to judge better in a few days.

At point marked on trace No. 40 a shaft was sunk for the purpose of examining the rock under the hollowed piece of ground south of the double gate; rock was found at 27ft. 6in., and to the east some rock-cut cisterns and a passage with steps leading down into them. A gallery was then driven to north, and another cistern about 17ft. square met with; the gallery was continued along the rock for 60ft. in search of steps leading up to Double Gate, but without result; the rock was found to have a scarp or steep down to east along the line of the gallery; I have since found the rock cropping up to the present surface about 100ft. higher up the hill, so that there is no chance of steps from the Double Gate having extended so far down.

Is there any chance of the theatre of Hadrian having been located near this spot? It is the only place that I have observed near the walls of Jerusalem where the ground takes the form of a theatre.

At No. 38 a shaft was sunk and rock found at 12ft., but we just happened upon a place where it is scarped down towards the west for 12ft. to 14ft.; this scarp was traced for about 15ft. to north-west and south-east.

I have elsewhere suggested that the Ophel Wall may have terminated on a rocky knoll about 200ft. south of the point to which we have traced it, and that then it may have taken a turn up towards the south-west angle of Haram Area; it would in such a case run very close to this scarp at 38 (see contour Plan), which might have been cut to give additional height to the wall; the plan gives the contours as obtained from the several points of rock we have at present met with.

At shaft No. 31 rock was found at 33ft. and a drain cut in the rock, in which some lamps were lying. (For direction of drain see Plan .) The rock is stepped out in a puzzling manner, and to west the jambs of a gateway were found; width from post to post 12ft.

At the point where is the rocky knoll we have found cisterns and strong walls, but they are built over with more modern masonry, and the whole is so blended together that I can make nothing of it; the more modern building has a floor paved with tesseræ.

At each shaft sunk south of the Haram Area, we have found the remains of buildings, drains, scarped and cut rock, and we may draw the inference that this portion was once covered with houses; we have, however, found no architectural remains *in situ*, and nothing that would repay the expense of keeping the ground open. As the work is generally 20ft. to 40ft. below the surface, it can only be got at by driving galleries at such depths, and as in this country the wooden frames quickly decay, it becomes a matter of necessity to tamp up the galleries soon after we have opened them. I am now tamping up all the galleries south of the Haram Area except two, where the Wall of Ophel can be seen by any travellers who come here during the ensuing spring months.

Cavern south of the Haram Area.—The cavern previously mentioned as having been met with in gallery from shaft No. 42, is cut out of the rock. The roof is flat; it consists of two chambers: the northern appears to have been about 12ft square, but a portion is taken up to east by a masonary wall; on the sides of the rock are small holes punched as though for some instrument to rest. (See Plan No. 34.)

The southern chamber is irregular in shape, and a portion of it is divided off by stone columns cut from the rock. Mangers or shallow vats exist round the chamber; in some cases the rock is cut in under, as in Plan No. 34, and in other cases the troughs are cut out of steps projecting from the face of the rock. They are from 18in. to 20in. wide, and where unbroken are 6in. deep; in one I found a plug hole, which shows that the vat was intended for the reception of some liquid. In the roof, on the walls, and at intervals under the troughs are eyes cut in the stone through which a 1½in. rope may be drawn. These eyes are formed by cutting two groves in the rock about 2in. apart, and then connecting them by a small hole, half-inch in diameter, about 1in. below the rock surface.

As we find the cave at present, it has the appearance of having been last used as a stable, and the floor is about 2ft. below the level of the mangers, but it cannot originally have been cut for such a purpose, as we find that the

true floor of the cavern is 11ft. below the troughs; so that it is apparent that the original object was not connected with housing and feeding cattle.

On entering a dyer's shop in Jerusalem you will find vats ranged round the room, and staples let into the wall from which lines are stretched for hanging up the cloth to dry. The difference is that at the present day the vats are circular, and those of the cavern are long and narrow. I have to suggest that this cavern may have been a fuller's shop, where clothes were cleaned or made white. Tradition relates that St. James was cast over the outer wall of the Temple enclosure, and that "a fuller took the club with which he pressed the clothes, and brought it down on the head of the just one."

The eyes made in the walls are similar to those cut in the piers of the substructions at south-east angle of Haram, which are sometimes called Solomon's stables, described in Captain Wilson's notes.

At the south-eastern side of the cavern there is a masonry wall, perhaps to support the rock roof which here appears to have cracked. Attempts were made to go through this wall, but it was not considered safe to continue the work.

About half the earth in this cavern has been turned over and a considerable amount of pottery has been found, but all in fragments. Also the lower part of a copper candlestick, which was found in two pieces that had originally been soldered together. The upper part has been turned in a lathe, the lower part has been probably pressed on a block. A sketch of this will be sent.

The rock above this cave is 4½ft. thick, and in the earth above is a drain containing glass and pottery, supposed to be early Christian; it must then have been some time back when this cave was used as a stable, and further back still when it was used for its original purpose.

In the roof is a peculiar cutting, as though for a piece of metal; and I cannot at present ascertain whether such a hole is made in oil-pressing rooms, &c.; but I have observed a similar cutting in the lintel of a doorway in Hârat ad Dâwâyeh, and perhaps some person may be able to explain it; but the dyers, fellahîn, and others about Jerusalem, say that they do not know its object.

Substructure in the Haram Area, near Bab Hytta (Plan No. 35).—At the northern end of the Haram Area east of Bab Hytta are two tank mouths, 16 and 17, which were not examined by Captain Wilson. They are closed by heavy stones. To the west of these is a private garden which projects out into, and forms part of, the Haram Area; in this garden are two other tank mouths. I examined one of these some months ago, but was unable to get down the other on account of the small size of the opening. On Monday last I went again to this garden to have another try at these cisterns, and first examined that to the west, which is simply a tank about 8ft. by 15ft., with a semicircular arch over it and no appearance of rock about it. I then went to the other, situate at the south-east angle of the little garden, which at this point is elevated about 10ft. above the Haram Area at mouth of 17 (the mouth 17 appears to be at an elevation of 2,413ft.) On sounding I found it 42ft. down to the water. I tried to descend, but to no purpose until I had nearly stripped

to the skin, and even then in my contortions I managed to slip the rope over one arm. The narrow passage was only for 3ft., and 10ft. from the surface I came on the floor of a little chamber about 6ft. square, apparently on a level with the Haram Area. The shaft down to the cistern continues through the floor of this chamber; and is a moderate-sized opening. On getting down to the water I found it only three feet deep, and concluding from the size of the cistern that help would be required in measuring, I signalled for Sergeant Birtle to come down.

On lighting up the magnesium wire and looking about me, I was astonished, my first impression being that I had got into a church similar to that of the cathedral (formerly a mosque) at Cordova. I could see arch upon arch to north and east, apparently rows of them.

After floundering about some little distance, however, I could see that there was a limit to these substructures at no great distance to north and east. In the meantime Sergt. Birtles was making great efforts above with very little result; do what he would he could not get past the narrow opening to the cistern, and at last had to give up the trial and go and get leave from the owner to pull down the upper mouth of the shaft, and then he very soon appeared at the bottom, his shoulders considerably injured in his exertions. In the meantime the excitement of our "find" had begun to wear off, and the water felt cold. I was just giving the sergeant some sage advice as to how he should direct his steps to the best advantage, when I stumbled over a large stone and fell into the water flat on my face. As just at present the weather is frosty, and the rain is generally accompanied by sleet or hail, a bath in one's clothes is anything but pleasant. I found the stones on which I stumbled to be about six in number: they average about 7ft. in length, and 3ft. in depth and width; I could see no inscriptions on them; they appear to have fallen in by accident.

The substructure, now used as a tank, is 63ft. from north to south, and 57ft. from east to west, thus being nearly square; its northern wall is 23ft. 6in. from the south side of the Birket Israil. It consists of nine rectangular bays, formed by four piers, cruciform on plan, equidistant from each other and from the walls, from which spring arches. The arches between the piers, and between the two northern piers and walls, are stilted or pointed; those from the two southern piers to the walls appear to be flying buttresses, unless the remainder of these arches are concealed behind the east, west, and south walls of the substructure. The dimensions of arches and piers all vary somewhat (see Plan No. 35), which may arise from the thick coat of plaster which exists up to the tops of these arches, that is, to about 14ft. above the floor of the tank; these arches support nothing, they merely strengthen the piers and resist any lateral thrust against the side walls.

The whole of the substructure is covered in by vaults intersecting in groins over the bays. Surface-ribs (of cut stone) are thrown over from the piers to the sides, the remainder of the arches being composed of rag-work; the vaults are pointed. The springing of the vault surface-ribs is 14ft. above the floor of the substructure, and the cement does not reach higher than that point. The vaults from springing to crown are also about 14ft. in height, giving a total of 28ft. from floor to crown.

In the south wall is a staircase leading up to the surface of Haram, which I

understand has been open within the memory of man. Near the bottom of the steps is a shaft leading up to entrance No. 17, and in the centre bay is an opening leading up to entrance 16. There is no appearance of an open continuation of these vaults in any direction. There is an opening on the northern side about 2ft. in height, and 1ft. wide, on a level with the top of the cement, which lets in light; and on examining the pool Birket Israil, I find a grating in the south wall (2ft. square) exactly opposite the opening in the substructure, and which undoubtedly communicates with it, but whether directly through the thickness of the wall, or whether through another chamber in the wall, has yet to be determined; through this opening any superfluous water in the substructure would flow into the Birket Israil.

The impression that I had got into a church still remains on my mind, I do not exactly know why; the vaults are so unlike any known tanks in Jerusalem, and so very different from the substructions at the south-east angle Haram Area. I cannot believe that such a structure as this was built merely for a tank, and if it was simply to support the present surface of the Haram, then there is probably more of it to be found to south and east.

We were altogether three hours in the water measuring, and I took everything I could get at, and have put the most important measurements on the 10ft. to an inch plan.

The vaults look small when compared to the Birket Israil in section, but then the Birket is really an enormous reservoir, nearly 100ft. deep.

The large stones I found huddled together at the bottom in the water, are, I think, evidence of the roof having once fallen in and been replaced.

Birket Israil (Plan No. 36).—Under the northern vault, 9ft. from the entrance, a shaft has been sunk, and at a depth of 14ft. 6in. a floor of concrete has been found, which at this point is 36ft. 6in. below the crown of the arch, and 43ft. 6in. above the bottom of the pool.

The floor has a slope towards the entrance where there are four stone steps 16in. broad and 7in. in height; the bottom step is nearly flush with the west wall of the pool, and from this step to crown of the arch is 49ft.; beyond this there is a landing 8ft. broad, and then a drop of 4ft. Attempts were made to get through the concrete at this point, but the instruments could make no impression on it; the gallery was then driven down along the face of the concrete to east, which is found to consist of irregular steps (see Plan No.). The concrete was followed down until at a point 22ft. above the bottom of the pool, the rubbish was found to be in too loose a state to work through, and the gallery has been discontinued; it is probable that in any case we could not have continued more than a foot or two deeper on account of the water in the pool.

What we learn from this work is, that the northern end of the pool, unlike the other sides, is built up of steps of concrete, similar to those found at the pools of Solomon; and the natural inference to be drawn is that there is no rock on any side above the bottom of the pool except to the north. We are now trying to drive through the concrete again in search of rock, but it is so hard that we make very little impression, and I don't wish to blast just at this point.

I send a trace (Plan No. 36), showing the nearest known points of rock to the Birket Israil.

We have been excavating in the cistern in garden N.W. of the Birket, where I thought there had been a N'aura, but we can find no signs of any aqueduct by which water could have been brought in; the cistern is 20ft. deep.

At the point where the Bab el Aten enters upon the Tarîk Bab Sitti Maryam, close to the traditional tower of Antonia, I have opened another cistern, and found rock as shown on trace; running north and south on the rock is an aqueduct which apparently filled the cistern in passing, and may have been used for the supply of the Haram Area or of the Birket Israil; it is blocked up after a few feet at each end, and the owner of the property would not have it opened.

Each step we take about the north-eastern end of the Haram Area tends to point out that there is a great depth from the surface to the rock.

XXXVIII.

February 11, 1869.

The Triple Gate and Tunnels on South Side of Haram Enclosure.—In my letter of 4th December, 1868, I said, "originally the so-called Triple Gate was a double tunnel, proof of which will be found on examination of the $\frac{1}{500}$ Ordnance Survey Plan." I have since seen that the eastern of the three tunnels extends further to the north than is shown in the Ordnance Survey Plan by at least two bays. It is, however, very much choked up by rubbish, and it may extend still further north as a third tunnel, or it may be continued further east in another set of vaults (see Plans 37, 38).

The vaults at the south-east angle are now very difficult of access. Some years ago a door opened into them from the "mosque of the cradle of our Lord Jesus," but subsequently it has been plastered up, and the entrance was from the surface over the remains of a fallen arch. Last year this arch was built up, in consequence of some report of deserters having secreted themselves in the vaults while the troops were at prayers in the Sacred Area.

At present there are only two means of entry, the one through a loop-hole (9in. wide and 19in. high) on the staircase leading to the "mosque of the cradle of our Lord Jesus," by a drop of 40ft., past an overhanging mass of crumbling masonry; an entry which, having once passed in safety, I am not anxious to try again. The other entry is by getting down tank X., and then up again through an old aqueduct into the vaults.

A few days ago, finding that I still required some measurements for the completion of an elevation of the western wall of the vaults, I went in through tank X. You enter from the surface of the Haram Area. There is first a shaft about 16in. square, and about 31ft. to top of the tank (rock), then a drop of 24ft. to bottom of tank, and 18ft. up again to the aqueduct leading to the vaults. The small ladder we could get down was only 12ft. long, and another, which we eventually got to lash on, was of slender proportions, having been made to assist young pigeons in getting up to their cote; the two together did not reach up to the hole, and we had considerable difficulty in getting up.

In tank No. X., in the roof of rock, is a space of 4ft. covered by a flat white stone, and Sergeant Birtles observed some carving upon it. It can only be seen in a certain light, but I have made an approximate sketch of its appearance. It must be nearly 30ft. below the surface of the Haram Area, and is probably very ancient, as it would appear to have been put over the cistern before the *débris* accumulated (see Plan No. 37).

The plans forwarded herewith consist of a plan of the Triple Gate, with elevations of interior and exterior, an elevation of west wall of vaults, and detail plans of the little that can be seen of three engaged columns. It will be seen on examination of the exterior arches of the Triple Gate and the arches of the west wall of tunnels, that they are of very similar construction.

The arches of the Triple Gate on inside are elliptical, and the jambs are formed of rather smaller stones than those on the outside. I can find no trace of any "colossal monoliths" about the gateway.

Forming part of the jambs of the western arch are two portions of engaged columns (see Captain Wilson's notes, p. 38) shown on plan. In the western wall there is a portion of an engaged column formed of two stones placed side by side, which, together with two other stones on either side, have every appearance of being *in situ*. This course appears to be about 4ft. 4in. in height.

The roadway up from the Triple Gate throughout its length is within a foot or two of the rock, and in three places the rock is cut down, and forms part of the western wall. I have examined the supposed lintel of a gateway in the western wall; it is part of the solid rock, and the narrow vacant space beneath appears to be a natural crevice.

Pottery.—Sketches of the most remarkable specimens are being got ready and will be sent as they get out of hand; as soon as the sketches are made the pottery will be packed up to await instructions, whether they are to be sent home or not.*

It is desirable that instructions should be sent as to the style of pottery most worth keeping: at present all specimens are kept, whether Arabic, Christian, or otherwise.

At the rock-cut passage at Ain al Luz'h no pottery was found (except fragments) until the seventh staircase was opened, when three lamps were brought out from different depths: they are of different construction; the first is similar to those found near the rock at Ophel, and which have been pronounced to be lamps of the third or fourth centuries; the second is not like any I have seen elsewhere, and the third is similar to one found in the older *débris*, which existed when the Haram Wall at south-east angle was built.

We observe that the whole of the ground of Ophel between the South Haram Wall and the Pool of Silcam has been built over, and lamps of a particular type (two of which have Greek inscriptions) are found there, and in no case has any known Arabic pottery been found. On the other hand, at the Birket Israil the pottery is totally different: it is in many cases highly glazed, and has patterns on it, and when it is unglazed it has bands of red or brown and other marks, very similar in appearance to the specimens of pottery found at Athens

* Some of these sketches are now mounted and can be seen at the office of the Society. The Pottery has all been brought home by Mr. MacGregor, and can be seen also at the office.

and Melos, and yet among this we have found two pieces of glazed jars with raised Arabic or Cufic inscriptions, the one being the usual invocation of Allah. It is curious that the only other instance in which we have found anything similar to the Grecian pottery was at the Muristan, where the rubbish accumulated is comparatively modern.

It is possible that if the jars were properly cleaned, characters might be found scratched upon them, as some of them evidently were used for religious or superstitious purposes. For example, the jar found placed in the hole in rock at the south-east angle of Haram Area.

I have carefully avoided cleaning any of the pottery for fear of damaging it.

Two stone weights (?) have been found; one at Ophel, weighing 2301·8 grains troy, the other at the south end of the bridge, at Robinson's Arch, above the pavement, and weighing 2885·5 grains troy; this gives a ratio of 4·5 within eleven grains; and if we divide by these numbers we get 575·4 and 577 grains troy as the unit of weight. The weight found at Ophel has a geometric figure on it, a sketch of which has been sent home.

Birket Israil.—The concrete floor under the northern Souterrain has been broken through, with great difficulty, and rock has been found at about 4ft. depth; that is, about 40ft. below the crown of the arch. The work is still in progress.

I believe this will be considered an important addition to our knowledge of the topography of Jerusalem.

First. It shows that the Birket Israil never extended further to the west than its present limit, at its present depth.

Secondly. It is apparent that the engineer would not have gone to the trouble of scarping down the rock on the other sides of the pool, and have left it in its natural state to the west; and this leads us to the fair inference that the pool has only rock on its western side.

Thirdly. We may draw the inference that no other enormous pools exist similar to and to the west of Birket Israil; that any ditches or pools to the west of it will be found to be cut out of the rock, and of comparatively small size, similar to that found near the Sisters of Sion Convent; and that if ever the Birket Israil was of larger extent than it is at present, it would only have been by a portion of the pool running north towards the west end of the Church of St. Anne, or south into the Haram Area.

Golden Gate.—Gallery has been commenced, and progress is slow—soil very loose and treacherous.

East of Olivet.—Two curious pot-like holes in the marly rock have been opened, and a good deal of pottery has been found, sketches of which will be forwarded.

Gate Gennath (so called).—A shaft is being sunk under the gateway.

WORKS IN PROGRESS.

February 2nd, 1869.

Shaft near Golden Gate.—Sinking through loose soil and rubbish; depth about 15ft.

Robinson's Arch.—The southern course of the arch has not yet been recognised among the *débris*, and the party are now clearing out a passage to the north.

Shafts and Galleries at Ophel.—Two parties are engaged tamping up.

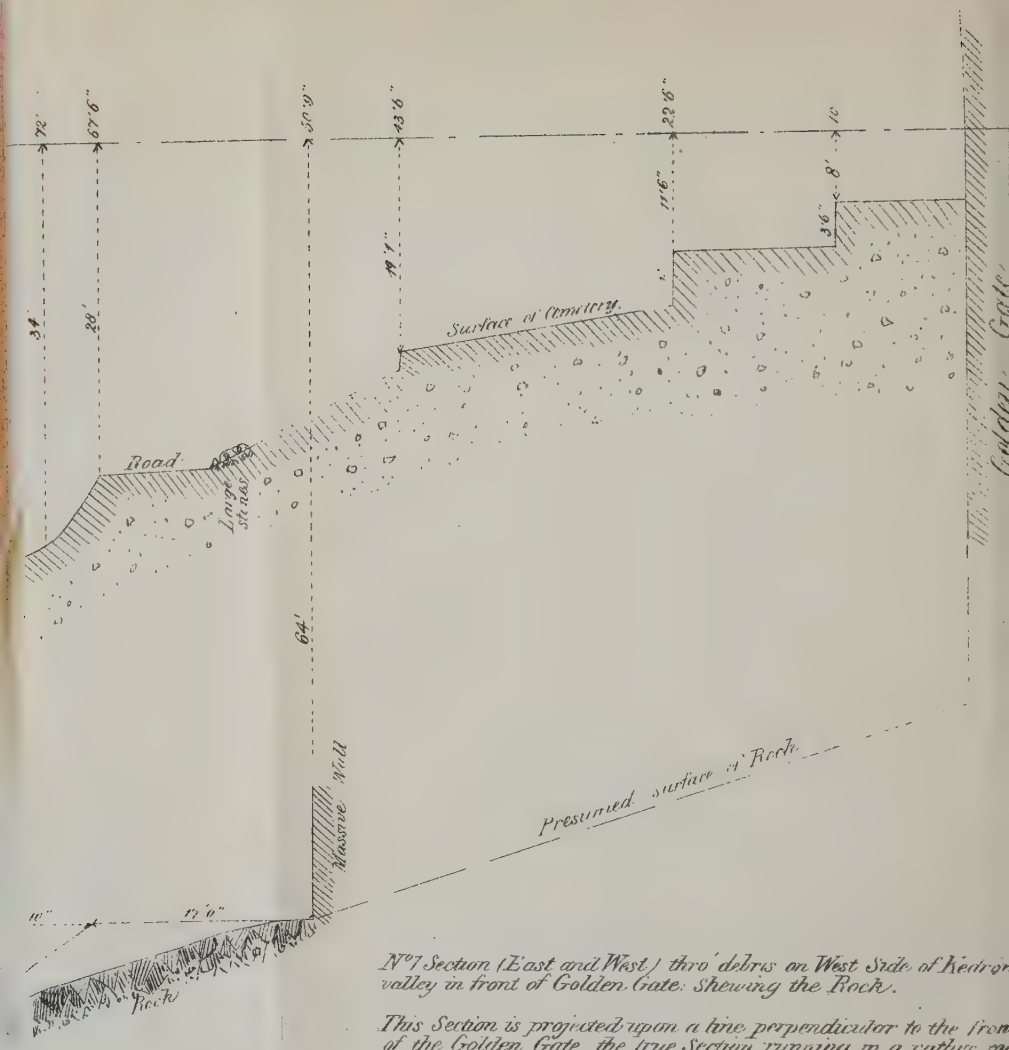
Gennath Gate (*so called*).—Sinking shaft in front of sill of gateway; depth, 6ft.

Birket Israil.—Searching for rock.

South-east angle Haram Area.—Examining wall. Another H has been found cut on a stone, but it has not yet been examined.

Palestine Exploration Fund

Plan N° 39 referred to in
Lieu^t Warrens Letter of 12^th May 1869.



N°7 Section (East and West) thro' debris on West Side of Redrock valley in front of Golden Gate. Shewing the Rock.

This Section is projected upon a line perpendicular to the front of the Golden Gate, the true Section running in a rather more northerly direction.

Work commenced 25 Jun[y] 1869 by J.' Corp[l] Willis R.E.
Massive Wall reached 10 March 1869
Gallery from column to Wall tamped up 13 March 1869 it being found impracticable passing through Wall

arlie Warren
Lt RE 12 May 1869

15 feet to an Inch.

0 40 50 60 70 80 90 FEET.

THE

PALESTINE EXPLORATION FUND.

PATRON.

HER MAJESTY THE QUEEN.

OFFICE—9, PALL MALL EAST, S.W., LONDON.

Reports on Progress of Works at Jerusalem and elsewhere in the Holy Land, by Lieutenant Warren, R.E.

XXXIX.

April 10th, 1869.

The Sakhra.—On Thursday, 8th inst., I visited the Dome of the Rock ("Mosque of Omar") and examined the Rock or Sakhra. On the north side there is a gutter cut out of the solid, leading from the western upper side to the northern lower plateau, The gutter is shown on the Ordnance Survey detail plan of Captain Wilson; extending in a northerly direction from the gutter for about 5ft. are two pieces of flagging lying horizontally on the rock, about 2½ft. in width. This flagging conceals an opening in the rock 5ft. long and 2ft. wide. Inside is a passage or cutting 2ft. wide and about 11ft. long, leading nearly due north; it commences from the end of the gutter, and the rock is cut down perpendicularly on both sides and at the southern end. At the northern end it could not be ascertained whether it was the rock or masonry. The first 5ft. of this passage is covered by the flagging, then for 4ft. its roof is of rock only about 4in. thick; beyond this the pavement round the Sakhra covers the passage.

At present this passage or cell is about 3ft. deep, but it is filled up at the bottom with soft earth or rubbish, and the real depth cannot be ascertained. It is not easy to determine the object of this passage or cell. It is unlike the tombs and loculi seen about Jerusalem, and it can hardly have been for draining the rain-water off the surface into a tank, as the gutter commences from the higher portion of the rock.

Sir John Maundeville relates (apparently of this Dome of the Rock) A.D. 1322:—

"And in the middle of the temple are many high stages, 14 steps

high, with good pillars all about, and this place the Jews call the holy of holies. No man except the prelate of the Saracens, who makes their sacrifice, is allowed to come in there. And the people stand all about in divers stages, according to their dignity or rank, so that they may all see the sacrifice." From this it would appear that the present exposed rock was then concealed by a raised dais, with steps leading down all round, in which case the gutter may have been used for carrying away the water when the dais was washed after the Moslem sacrifice.

I may here offer a suggestion with regard to the Dome of the Rock, which I have not seen hinted at in any work, viz., that it may be the Sepulchre of David. Messrs. Fergusson, Thrupp, and Lewin object to the traditional site of the tomb of David (at the Cœnaculum), and the two former place it near to the temple area.

XL.

11*th May*, 1869.

Golden Gate.—The Golden Gate occupies a position in the east Haram Wall, where an examination below the surface would probably afford much valuable information. Unhappily, the greater portion of this east wall is lined with Mahometan tombs, and we are precluded from digging near them. It is true that a shaft could be sunk through the cemetery without in any way interfering with the graves, but it is very doubtful whether permission for this could be obtained.

It does not appear that there is any real feeling on the subject, as we find on all sides tombs, Jewish, Christian, and Mahometan, used as dwelling-places and stables by the people of the country, and sarcophagi used as watering troughs; but there is a certain amount of sentiment involved, and the same people who see no harm in the destruction of tombs while quarrying, in using them as stables, and in building the tombstones into their houses, think it desecration for a Frank in any way to examine these interesting relics.

It being desirable, then, to examine the wall at the Golden Gate, the only method was to sink a shaft at some distance off and drive a gallery up, so as to be altogether out of the way of the cemetery. (See plan 40.)

The nearest convenient point was found to be 143ft. from the south end of the gate, and in a line perpendicular to its front, in a piece of ground through which a shaft was sunk in 1867.

This point was found to be 55ft. 6in. below the level of the ground outside the gate. The shaft was commenced 25th January, 1869, and sunk down 25ft. 6in., giving a total difference of level between the ground outside the gate and the bottom of the shaft of 81ft. (See section. Also for nature of soil sunk through see Letter V., 12th September, 1867.)

A gallery was then driven in to west, and at 10ft. 3in. the rock was struck, rising about one in four to the west; the gallery then rose gently with the rock until at 18ft. 6in. a tank or rock-cut tomb was crossed. The examination of this was reserved, and the gallery continued, until at 27ft. the rock was found to present a cut scarp of 3ft. 9in. height, on the south side, running in a north-westerly direction, the natural surface of the rock inclining to the north. The scarped rock was followed for over 10ft., when it suddenly took a turn to north, and it was necessary to cross over it. On top of the scarp a rough masonry wall was found, which was broken through. At this point, 37ft. from the shaft, the total rise in the gallery was 8ft.

The rock is *mezzeh*, and on the scarp, about 2ft. 10in. from the bottom, was found a hole cut for passing a rope through, similar to those found in the cavern south of the Triple Gate (described January 30th, 1869). This ring or hole was apparently for tying up animals to.

The gallery was now continued on a gradual rise through a loose and dangerous accumulation of stones. At 47ft. the rock was found to rise suddenly to a height of 4ft., and at 53ft. another rough masonry wall was encountered and broken through. At 68ft. a portion of the shaft of a column (3ft. in diameter) was met with, placed erect in the *débris*, and about 3ft. above the rock. (See sketch in "Illustrated London News," page 425, April 24th, 1869.) On the bottom of this shaft of column are what appear to be masons' marks, of which I have taken a cast.

From this point forward the work became very dangerous, the gallery being driven through a mass of loose boulders alternating with layers of shingle, which on being set in motion runs like water.

At 85ft. from the shaft, the gallery had ascended 25ft. 6in. The *débris* now began to run into the gallery, forming a cavity above; and to prevent further falls fifty old baskets were stuffed in, and a quantity of old timber. After a considerable amount of labour the gallery was continued, and at 97ft. (*i.e.*, 46ft. from the Haram Wall) a massive masonry wall was reached, running north and south.

An attempt was made to break through this wall, but after getting in 5ft. it was abandoned: the stones being of large size it was also found not practicable to get over the wall, as it appears to continue up to a considerable height. A gallery was then driven south along the wall for 14ft., but there was no appearance of any break. The *débris* pierced through was of the loosest description, and the gallery had become in a highly dangerous state. I therefore had it tamped up, leaving in all the frames for about 30ft.

The tamping up was continued as far as the hanging column, and at the same time a branch gallery was driven to north from a point immediately east of the column. At 14ft. it was turned-in to the west (see plan $\frac{1}{500}$). It was found that there was here about 3ft. of solid earth between the *débris* and the rock, and by very careful management the gallery was driven on for 34ft. from the turn. At this point the massive

wall was again met with, running in a north-westerly direction; the gallery followed along it, but the layer of solid earth gradually diminished in thickness, until on 28th April, when 55ft. from the turn, the shingle suddenly came in with a rush, quickly filling up 6ft. of the gallery, and burying some of the tools. An attempt to remove this shingle was of no avail; when touched it only ran further into the gallery, and I have, very reluctantly, been obliged to abandon the work.

Although we have not succeeded in our object at this point, we have at least obtained some interesting results.

1. It is now nearly certain that at the Golden Gate the Haram Wall extends below the present surface outside, to a depth of from 30ft. to 40ft. (See section $\frac{1}{500}$.)

2. It appears that the rock has an inclination to the north near the Golden Gate.

3. The massive wall where first encountered is about 50ft. in front of the Golden Gate. It appears from thence to run to north and gradually turns in to west, apparently following the contour of the ground.

This wall is composed of large quarry-dressed blocks of *mezzeh*, so far similar to the lower course seen in the Haram Wall near the Golden Gate, that the roughly dressed faces of the stones project about 6 inches beyond the marginal drafts, which are very rough. The stones appear to be in courses 2ft. 6in. in height, and over 5ft. in length. On trying to break through the wall a hole was made 5ft. 6in., without any signs of the stone terminating. The horizontal joints are not close, but appear to be about 12in. apart and filled in with stones 6in. cube, packed in a very curious cement, which now looks like an argillaceous stone and has a conchoidal fracture. The fellahin pronounce it to be formed of lime, oil, and the virgin red earth, and state that such is used at the present day in the formation of cisterns. Specimens of this cement have been sent home.

It is disagreeable to have failed in reaching the Golden Gate, but to pierce through the *débris* of the nature encountered, some special machinery would have to be used; and it is dangerous to put anything but the simplest instruments into the hands of the fellahin.

We also cannot work more than a certain number of days at a time at a difficult place, as the constant danger causes the nerves to become unstrung after a time, and then a few days at safer work is required; only those who have experienced the peculiar effect of the rattling of the *débris* upon the frames, with the prospect at any moment of the boards being crushed in by a large stone, can appreciate the deterring influence it has upon the workmen. The non-commissioned officers have to keep continually to the front, or the men will not venture up.

It appears probable that the massive wall met with may continue up to the surface, as immediately above it, in the road, are some large roughly bevelled stones lying in the same line.

I send by this mail a section ($\frac{1}{120}$) of the rock in the Golden Gate, and

to follow is an approximate elevation of the East Haram Wall ($\frac{1}{300}$) and a section through the Haram Area.

XLI.

May 17*th*, 1869.

Bab el-Mathara.—Having failed to find any entrance similar to Barclay's Gate in the West Haram Wall, south of Wilson's Arch, I have been making a search to north of that arch. Any examination here is difficult, as the present surface outside is generally about the same level as, or higher than, that of the Haram Area.

Twenty feet to the south of Bab el-Mathara is a large cistern (numbered xxx. on the Ordnance Map), which was discovered and surveyed by Captain Wilson: it runs east and west, and is shown as piercing the Haram Wall. On plan it is singularly like the vaulted passage leading from Barclay's Gate; it is of the same width, and runs the distance into the Haram Area, but it does not appear to turn round at the inner extremity, as the other passage does.

It would be very interesting to ascertain whether over this cistern (xxx.) there is a lintel similar to that at Barclay's Gate.

Yesterday, when examining the Haram Wall on the outside, in an Effendi's house, I found a cistern which, on examination, proved to be in direct prolongation of cistern xxx., but not so wide. It was nearly empty, and I was able to go down and measure it. It is 34ft. 6in. from surface of ground to bottom; width from north to south, nearly 12ft.; and length from east to west, 14ft. 9in. On the south there is a recess, so that the Haram Wall is exposed over a surface 28ft. in height and 12ft. in length, but it is for the most part covered with plaster. At 22ft. from the bottom can be seen the springing of a modern masonry arch, which is apparently the western extremity of the vault of cistern xxx. There are no signs of any lintel or large stones, but the surface here is over 6ft. above the general level of the Haram Area, and the wall, free of plaster, could only be seen to a depth of 12ft. below the surface, that is to say, it could not be seen so low down as the level of the upper bevelled course at the Jews' Wailing Place. It is very necessary that the plaster covering the wall should be removed, as by so doing the wall would be bared to a level lower than the bottom of the lintel at Barclay's Gate.

It is desirable that Captain Wilson's description of this passage or cistern xxx. should be published. What I have here written is in continuation of his remarks.

No. I.—Return showing the height, &c., of Courses of Stone at Barclay's Gateway, exposed by an excavation commenced 17th March, 1868, and completed. The stones 1 to 8 are above ground, and were observed about 40ft. from Barclay's Gate to north; the remainder, from B to V, are beneath the surface of the ground.

		Height of Course.	Top Bevel. 1	Top Bevel. 2	Bottom Bevel. 1	Bottom Bevel. 2	North Bevel.	South Bevel.	Set-out.	Depth of Bevel.	Remarks.
		ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	
Squared stones ...	8	3 5							0 0		
	7	2 5			No	bevels.			0 1		
	6	3 10							0 1		
	5	3 6							0 1		
Bevelled stones	4	3 4	0 6¼	0 6½	0 2⅜	0 2¼	0 2¼	0 2½	0 1	0 0½	Worn.
	3	3 6	0 4⅞	0 3⅜	0 2	0 1⅛	0 1¾	0 2⅛	0 0¾	0 0⅜	Worn.
	2	3 8	0 4½	...	0 2¼	...	6 10	high	0 0⅞	0 0⅜	Worn.
			Lintel course.					...			
	1	3 2	0 3¾	...	0 1⅝	...	...	...	...	0 0¼	Worn.
	A	3 5		...	...	...	...		0 1	0 0	Very much worn.
	B	3 8	0 3	...	0 3⅜	0 3⅞	0 3	0 3	0 1	0 0	In good preservation.
	C	3 7	0 3½	...	...	...	...	...	0 1	0 0¼	Worn at bottom.
	D	3 3	0 3½	...	...	...	...	...	0 0¼	0 0¼	Broken at bottom.
	E	3 8	0 3⅞	0 2	0 2¾	...	...	...	...	0 0¼	In good preservation.
	F	3 8¼	0 2¾	...	0 2⅛	...	...	...	0 0½	0 0¼	Stone worn.
	G	3 8	0 2¾	...	0 2½	...	...	...	...	0 0¼	Well preserved.
	H	3 9½	0 4½	...	...	...	...	...	0 0¼	0 0¼	Top in good pres., bottom worn.
	I	3 4½	0 4	0 2½	0 2⅞	...	...	...	0 0¾	0 0¼	Broken sill, course of gate.
	J, K	7 8½	0 5⅜	...	...	...	...	...	...	...	Not seen.
	L	3 10¼	0 5½	...	0 4⅝	...	...	...	0 0¾	0 0¼	Well preserved.
	M	3 9¼	0 4¾	...	0 3	...	0 2⅞	0 2⅜	0 1½	0 0⅜	Ditto.
	N	3 11¾	0 3½	0 3½	0 3	...	0 2¾	0 2⅜	0 0¼	0 0⅜	Ditto.
	O	3 6¾	0 5	0 1¾	0 3¼	0 2¼	0 2¾	0 2	0 0½	0 0⅜	Ditto.
	P	3 6½	0 4½	0 4⅝	0 4¾	0 2¾	0 2	0 2½	0 0¾	0 0⅜	Ditto.
	Q	3 5	0 4¼	...	0 2⅜	...	...	...	0 1¼	0 0¼	Top well pres., bottom broken.
	R	3 6½	0 4¼	0 3¾	0 3	0 3	0 3	0 2¼	0 1	0 0¼	Ditto ditto.
	S	3 6	0 4	...	0 3	...	...	...	0 1¼	0 0¼	Ditto ditto.
	T	3 5½	0 3¼	0 3¾	0 2½	0 2¼	0 2½	0 2¼	0 0½	0 0¼	Ditto ditto.
	U	3 7½	0 3	...	0 3¼	...	...	...	0 0½	0 0¼	Ditto ditto.
	V	2 5½	...	...	...	...	...	...	0 0	...	Nobevell, stone embed. in rock.
Total distance from Rock to Lintel	...	78 6¼					Total set out		0 12½		

20th May, 1869.

CHARLES WARREN, Lieut. R.E.

No. II.

Return showing the height of Courses of Stones in the Haram Wall immediately south of Wilson's Arch, exposed by an excavation commenced in November, 1867.

The second column shows the height of each course at Barclay's Gateway.

		Height of Course, Barclay's Gate.	Height at Wilson's Arch.	Top Bevel.	Bottom Bevel.	Side.	Bevels.	Set-out.	Depth of Bevel.	Remarks.
		ft. in.	ft. in.	in.	in.	in.	in.	in.	in.	
Squared stones.	8	3 5								
	7	2 5								
	6	3 10								
	5	3 6								
Bevelled stones.	4	3 4	3 4½							
	3	3 6	...							
	2	3 8	3 6							
	1	3 2	3 3							
	A	3 5	3 6							
	B	3 8	3 6							
	C	3 7	3 6							
	D	3 3	3 4	...	...	...	...	...	...	Broken away.
	E	3 8	3 9½	4	3	4	2¾	1½		
	F	3 8¼	3 8½	...	4	2½	2½	1		
	G	3 8	3 8	2½	4	2	2¼	1¼		
	H	3 9½	3 9	2¾	...	3	2½	1		
	I	3 4½	3 3	...	...	...	...	1		
	J	7 8½	4 1	...	...	...	...	0½	⅜ to ⅝	Very rough.
	K		3 11	5	2⅜	...	...	1		
	L	3 10¼	3 11½	5	2½	...	...	1		
	M	3 9¼	3 10	5	3	...	...	1	⅝	Very nicely worked and preserved.
	N	3 11¾	3 9	5	2¼	...	...	1½	...	Very nicely worked and preserved.
	O	3 6¾	3 9	...	3	...	...	2½	⅛	Much worn.
	P	3 6½	3 6	6	...	...	...	1½		
	Q	3 5	2 10½	No draft.		...	...	6		

May 21st, 1869. CHARLES WARREN, Lieut. R.E.

The fifth course is bevelled under the Mahkameh, but not so at the Wailing Place.

May 21*st*, 1869.

West Wall of the Haram Area.—That portion of the Haram Wall to be seen above ground is described in Captain Wilson's notes; I will now describe those portions of the wall which we have exposed below the surface to west.

Excavations have been made along the Haram Wall to west in three places, viz., in front of Robinson's Arch, Barclay's Gateway, and under Wilson's Arch.

At Robinson's Arch we were not permitted to excavate near the wall; we therefore commenced a shaft at a distance of 72ft., sunk down to rock, and then drove in towards the wall, passing the pier and getting among the voussoirs of a fallen arch. Not being able to make our way through these voussoirs, we sunk through the pavement on which they rest, and 20ft. lower down came upon a rock-cut aqueduct, with two circular pools cut out of the rock to the north and south of the bridge. The Haram Wall was then reached and examined, but only at its foundations, where it rests upon the rock. The stones here are bevelled, but rather carelessly worked.

At Barclay's Gateway we exposed the whole of the courses in the Haram Wall, from the lintel of the gate down to the rock, a depth of 78ft. 6in.

At Wilson's Arch we also bared all the courses, from the springing of the arch to the rock, a depth of 54ft. 8in.; and also in a chamber of the Mahkameh, to the south of Wilson's Arch, we bared the wall for 17ft. in search of the second suburban gate. A return of the stones met with in the wall is given (see pp. 108 and 109), showing the heights and width of drafts. From this it may be seen that the courses of stone at Wilson's Arch and Barclay's Gateway differ in height sometimes to as much as 2in. There can be no doubt, however, that they are the same courses throughout.

We find that from stone C to E, at Wilson's Arch, it measures just 25ft., and at Barclay's Gateway the same; and in the same way, taking any number of the courses together, and comparing them, we find that they agree in height. We therefore presume that from the northern end of Wilson's Arch to Barclay's Gateway it is one wall from course 4 to the rock, and that in this space there is no other existing gate similar to that of Barclay.

We have, then, in the western portion of the Haram Wall, two bridges and one gate, and the two bridges so far correspond to each other that they have the same span to 6in., and the spring of Wilson's is only 7ft. above that of Robinson; in other respects, however, they differ. The pier of Robinson's Arch is of bevelled stone, and appears in every way similar to the wall of the Haram. The pier of Wilson's Arch, on the contrary, is for the first 19ft. built up of rough blocks, and after that height of large squared unbevelled stones, similar to those *above* the bevelled stones at the Wailing Place: also the voussoirs of Wilson's Arch are of a style which, I understand, is not met with until

late in the days of the Roman Empire. This, together with the fact of our having met with a great heap of masonry (apparently voussoirs) in the place where a former arch would have fallen, may lead us to suppose that the existing arch of Wilson cannot date so far back as the building of the Haram Wall; the stones at the springing and for the first two courses are, however, apparently of the same age as the Haram Wall.

May 20th, 1869.

Haram Wall, at Wilson's Arch.—The ground about Wilson's Arch, below the surface, was examined in the latter end of 1867. (See letters XX.—XXII.)

On 20th November, 1867, a shaft was commenced alongside the Haram Wall, immediately under the southern end of Wilson's Arch (see elevation), in the Pool el-Burak. The bottom of this pool is composed to a depth of 3ft. 6in. of a very hard concrete, formed of stones about 3in. cube, set in a hard cement. The first course below the surface is cut back about 18in., apparently for the skewback of an arch. Below this the stones are very similar in appearance to those at the Wailing Place, but in better preservation. After passing through the concrete we came upon black soil, and at 21ft. we came in contact with a mass of very large stones, apparently the voussoirs and bevelled stones of a fallen wall and arch. We were here delayed some days, as the stones, being of *mezzeh*, could not be broken up with the hammer. Eventually a hole about 2ft. square was cut through, and we were able to continue our shaft. The stones passed through appear to be similar to those in the Haram Wall, and the mass of them together is about 8ft. deep. Continuing down, we arrived at water at 44ft. from the surface, which, on being observed for several days, was found to bubble in at the northern end of the shaft and run out at the southern end; but after a night of heavy rain the water disappeared (see letter of December 21st, 1867), and we were able to continue down the Haram Wall until at 51ft. 2in. from the surface, or 54ft. 8in. below the springing of Wilson's Arch, we came upon the rock. The last stone (Q) of the Haram Wall is let into the rock, and we sunk down about 18in., until we could see the bottom of the stone. There has been water on the rock since we opened the shaft until the present time, and it appears to have a very gentle motion towards the south; at certain times it rises 2ft. or 3ft. The last 8ft. or 10ft. we passed through before coming to the rock is full of limestone crystals.

We now made a landing at 21ft. from the top of the shaft above the large stones we had met with and drove a gallery in to south along the Haram Wall, in search of any appearance of the second suburban gate. At 23ft. we came upon a wall of well-dressed stones, 2ft. by 2ft., butting on to the Haram Wall. We were close to the top of it, and, passing over, found a pavement extending 11ft., when we came upon a wall

immediately below the southern wall of the Pool el Burak. Having found no signs of any gateway in the Haram Wall, this gallery was abandoned.

We now sunk a shaft about 18ft. south of the southern end of the Pool el Burak, along the Haram Wall, to a depth of 17ft., in search of the gateway, with no result.

The width of Barclay's Gate is nearly 19ft., and it can be seen on looking at the elevation ($\frac{1}{120}$) that if a second suburban gate existed to south of Wilson's Arch similar to Barclay's Gate, it would have been visible in the shafts or gallery, or in some part of the Haram Wall which is to be seen in the chambers under the Mahkameh.

We now commenced a shaft on the east side of the pier of Wilson's Arch, about 7ft. from the southern end, and found it to be built of large, well-cut, squared stones, rather larger than those in the Haram Wall, but without any bevel. At 11ft. 6in. we came upon a recess in the pier, covered over with a great lintel, and similar to the recesses found in the pier at Robinson's Arch, except that it extends through three courses instead of two. It is 9ft. 5in. in height, and about 6ft. wide, and reaches 5ft. into the pier. Apparently it has once been used as a gateway, as there are grooves cut in the stone as though for an iron gate. Below this recess the pier is formed of great roughly-hewn stones, to a depth of 19ft., when rock was struck. A gallery was now driven along the rock across the valley to the east, from the bottom of this shaft, until we reached the other side, close to where our first shaft is. In this gallery we found the rock to have a general inclination towards the east. There was a good deal of water in this gallery, and at last we were nearly swamped out of it.

It is apparent that the lower part of the pier, below the recess, was built after the *débris* had filled up the Tyropœon Valley to that height, and that the portion above and including the recess has the same appearance as the portion of the wall (four courses) of squared stones *above* the bevelled stones at the Wailing Place.

It is also to be remarked that at 21ft. down the eastern side of this pier we met with the same kind of fallen masonry as in the shaft along the west wall, from which we may infer that an arch existed previous to the present one, and that it fell after the *débris* had filled up over the rock to a height of from 20ft. to 30ft.

Barclay's Gate.—In the west wall of the Haram Area, about 270ft. from the south-west angle, immediately under the Bab el-Magharibe, is an enormous lintel, which, it appears, was first prominently brought to notice in this century by Dr. Barclay, of the United States, in his "City of the Great King."

As there does not appear to have been any generally received name for the gateway over which this lintel rests, we have called it after Dr. Barclay.

In 1866 Captain Wilson excavated to a depth of about 25ft. in front of the north jamb of the gate without reaching the sill. He also explored a cistern in the Haram Area, which proved to be the continuation of the Mosque el Burak, the two together forming the passage leading from Barclay's Gate to the Haram Area above.

A brief description of the lie of the ground at this point may be necessary. The general level of the Haram Area is 2,420ft. above the Mediterranean, but near the Bab el-Magharibe it is 2,416ft. Immediately outside this gate the general surface is about 2,395ft., and a ramp leads up to the Bab from the ground below. This ramp, near the wall, is formed by two vaulted chambers, one over the other; in the lower one the lintel can be seen. The height of the lintel is 6ft. 10in., the total length visible is 20ft. 1in.; the bottom is at a level of 2,398ft. 5in., being 5ft. 5in. above the surface of the ground at that point. The northern jamb of the gate can be seen; it is flush with the northern side of the older portion of the passage inside, which is here 18ft. 8in. wide, and we may reasonably suppose the gateway to be the same width. The lintel would then be 24ft. 8in. in length.

The space below the lintel, forming the gateway, between the two jambs, is built up in rough rubble, with here and there a few cut stones. Immediately above the lintel there are no courses of bevelled stones; the masonry is modern, and the stones are small. At the Jews' Wailing Place there are two courses of bevelled stones and four of squared stones above the level of the top of the lintel, but these all terminate abruptly at about 12ft. from the gate.

An excavation was commenced here on 17th March, 1869. It was desirable to sink the shaft at some distance from that of Captain Wilson, as where the soil is very loose it is dangerous to work again in an old excavation. We commenced about 7ft. north of the jamb of the gate alongside the Haram Wall. A description of each stone met with in the Haram Wall is annexed. About 5ft. below the surface we came upon a lamp and a good deal of broken pottery, of a different description to what we had hitherto met with, and bearing beautiful impressions of scrolls and other devices. At 14ft. a gallery was driven in to south, until we reached the north jamb of the gateway, the soil being black and very loose. We here came upon the shaft of Captain Wilson, and a rush of earth came into our gallery. On looking up into the void space a stone corbel was seen to be built into the rubble masonry under the lintel. It must, of course, have been placed there when the gate was blocked up, and was probably for the foundations of a house to rest on. I imagine that the foundations of the vaulted chambers on which the ramp leading to Bab el-Magharibe is laid rest upon similar corbels on the side near the Haram Wall. A plan and section of the corbel is given.

Having made secure the gallery where the rush had taken place, a shaft was sunk down along the northern jamb, through hard earth mixed with large stones, some of them 2ft. long. At about 23ft. from the surface the sill course was met with. This course, however, is

broken, so that it cannot be said whether the top or bottom of it is the true sill of the gate. The top is 28ft. 9¼in. below the lintel, and the bottom is 32ft. 1¼in. below it.

We now continued our shaft, and 9in. below the bottom of the sill course came upon stone flagging forming the flat roof to a drain running along the Haram Wall towards the south-west angle. This drain is 2ft. 4in. wide, and 5ft. 6in. high. It is the same drain which we found *above* the pavement at Robinson's Arch, and which we followed up to Barclay's Gateway. (See letter xxvii., 22nd August, 1868.) Men were sent to knock at the extremity of this drain from Robinson's Arch, and they could be heard quite plainly, but we could not communicate through to our shaft at Barclay's Gate, as rubbish had fallen in and stopped up the passage.

Sinking through this drain, we came upon the top of a wall, perpendicular to, and abutting on, the Haram Wall, at 31ft. below the surface. We first sunk to south of wall, and found ourselves in heavy masonry; then sinking to north of it, and finding the face to be of well-dressed squared stones, in courses, we continued our shaft alongside of it until at 66ft. 7in. from the surface we passed its foundations. We then continued along the Haram Wall, and at 73ft. 7in. struck the rock, which is cut horizontally, and the bottom stone of the Haram Wall is let into it.

For the last 30ft. we had passed through *débris* composed of hard earth and broken cut stones, many of them 3in. by 2in. by 1ft. 6in. On tamping up, a gallery was driven to south, through the wall butting on to the Haram, to a distance of 8ft., where it was found that it had been a retaining wall, about 6ft. thick, there being no southern face to it. From this it appears that the road to Barclay's Gate from the Tyropœon Valley may have been by means of a causeway, raised 46ft. above the rock. Whether it may have been solid or supported on arches is not apparent.

The shaft at Barclay's Gateway has now been tamped up.

The Haram Wall has thus been bared to a depth of 78ft. 6in. from the bottom of the lintel of Barclay's Gate to the rock, and the stones are of one appearance throughout, and are probably *in situ*. There are twenty-six courses of bevelled stones in all, twenty-two below the lintel, two on a level with the lintel, and two above it. These two latter courses do not now exist immediately above the lintel, but can be seen a little further to the north at the Wailing Place. Above these, again, are four courses of squared stones, without bevels, except in portion of the fourth and lower course, at the farther end, near the Mahkameh, where bevels are to be seen.

It is interesting to compare the stones above ground at the Wailing Place with those we have bared beneath the ground at Barclay's Gate, and for this purpose I annex a tabular form (see p. 109), showing the height of each course in the wall at this point, and the width of bevel or marginal draft, and also the set-out of each stone.

The first course below the lintel is very much worn, and is shown on

plate 12 Ordnance Survey, as being 3ft. 2in. in height. By taking it in conjunction with the courses above and below I find it to be 3ft. 5in. in height.

The stones we have laid bare are in a much higher state of preservation than those at the Wailing Place. It is curious that many of them are in good order at the top and damaged at bottom.

With one exception we have found the top bevel to be a little broader than that at the bottom, and this we observed, also, to be the case in the stones uncovered on the south and east faces of the Haram Wall.

XLII.

May 31*st*, 1869.

Haram Wall to West, continued.—I have levelled round from the Wailing Place, and find the line of springing of Robinson's Arch to be on a level with the bottom of Stone C, Barclay's Gate, and the first courses above and below are similar at both places; so that, though we are not yet in a position positively to assert that the same courses run through from Wilson's Arch to the south-west angle, yet it does seem likely that this is the case. We must now, if possible, sink a shaft down along the Haram Wall under Robinson's Arch, and another at the south-west angle, to bring the matter to a satisfactory conclusion.

We may now, with the accompanying elevation of the Haram Wall to west, examine into the ancient lie of the ground in the Tyropœon Valley.

We find a drain running under the level of the sill of Barclay's Gateway and over the ruins of the upper arch of Robinson; and we may therefore suppose that Barclay's Gateway was in use after the fall of Robinson's Arch. Now the *débris* of what appears to be the first arch of Wilson is on a level nearly with the sill of Barclay's Gate, and also within two or three feet of a polished marble (*mezzeh*) pavement, which we found round the south-west angle. Are we, then, to suppose that at one time there was a nearly level pavement round the west and south walls of the Haram Area, and that at that time the first Arch of Wilson and the Gate of Barclay were in use, but that the Arch of Robinson was in ruins? And because we find that below this level the pier of Wilson's Arch is roughly built, are we to come to the very awkward conclusion that Robinson's Arch was in use and in ruins before the present causeway going over Wilson's Arch was constructed?

I call it a very awkward conclusion, because I cannot at present see how it can be avoided; and yet it does not appear to accord with the account of Josephus; and it is the more difficult to comprehend because the secret passage which we have discovered running under the cause-

way must be identified with that described by Mejr-ed-din in the sixteenth century. As this is a question of some moment, I will quote from the translation of Mejr-ed-din given in Williams's "Holy City" (i. 157):—"The Street of David.—This is the great street which commences at the Gate of the Chain (Salsala) of the Mosque el-Aksa, and leads to the city gate, once called of the Mihrab, now of Hebron (Kahlil). . . . so named from a subterranean gallery which David caused to be made from the gate of the Chain to the citadel, called the Mihrab of David. It still exists, and parts of it are occasionally discovered. It is solidly vaulted."

I suggested some time ago that originally Wilson's Arch was only 20ft. wide; and if this is so, we might find that the northern portion of the pier is more ancient than the southern. Objections are made to our digging any more under the Mahkameh, or this point might be settled.

It is to be observed that the aqueduct running under Robinson's Arch is vaulted as far north as Barclay's Gateway, and beyond that its roof is formed of flat slabs. Under the street leading to the Jews' Wailing Place the aqueduct is cut through by the foundations of a building, and we could not examine it further; but I am under the impression that it is in connection with the aqueducts we found under the causeway leading over Wilson's Arch.

Sculptured Slab.—A short time ago a fellah, when digging on the south-east side of Mount Sion, found in a hewn cave a slab of sculptured marble, in size and appearance very similar to those found built into the walls of the mosques in the Haram esh-Sherif (see Plates 13 and 14, Ordnance Survey Plans).

This slab has a cross upon it; and also the ornament inside the wreath appears to be a cross coupled with a fleur-de-lis, similar to one of the ornamented sides of the great red marble font which is now to be seen at Tekoa.

Doric Capital.—This was found in a shaft south of the Haram Area, at Ophel, about 14ft. below the surface. It is the only specimen of the order we have found under ground. The other Doric capital, of which you have a profile, was picked up by Professor Donaldson on the surface of the ground near Siloam.

Ionic Capital.—This capital was found in the Birket Israil, about 20ft. below the surface of the rubbish. It is roughly cut, but has an elegant appearance from a distance, and is only the second specimen of the order found in the excavations.

Shaft of Column.—The shaft was found standing upright in the gallery running up towards the Golden Gate. The marks cut in with the chisel are about one-eighth of an inch deep, and appear to be masons' marks. A sketch of this shaft is given in the *Illustrated London News* of April 24, 1869.

North-east Angle of Haram Area.—The excavations at this point are still in progress, but so much has been done, and so much important information obtained already, that I think it better to summarise what we know, however imperfect it may be, rather than let it run on for another three months.

Twelve shafts have been sunk to east of St. Stephen's Gate, and north-east of the Haram Area. Three of these are yet in progress, and if only we can successfully drive galleries from them, I am sanguine of very important results; results not only great of themselves, but which are likely to increase in a great measure the value of what we know at the south-east and south-west angles.

Though it would not be right at present to form a permanent theory on any of the disputed points, yet it is impossible not, and in fact most necessary, to look ahead and conjecture what we are likely to come across, for without so doing the excavating must degenerate into a wild probing of the ground, instead of a systematic investigation. And though in the following brief account I find it necessary to couple conjecture with fact, in order to give any idea of what our results are, and to what they tend, yet I do so with the knowledge that each day my views must be modified by the accumulation of fresh results, and they must go on changing until by constant probing we can speak with certainty of the ruins of ancient Jerusalem. I may quote in illustration of this, my letters of 1st and 2nd February, 1869, in which I came to the conclusion that there is rock only on the western side of the Birket Israil (so-called pool of Bethesda). I was fully impressed with the idea that on the eastern side, the valley running south from the Harat Bab Hytta, ran out into the Kedron, after having been joined by the valley, which I conjecture to run east from Bab en-Nazir, north of the platform of the Dome of the Porch. Also in my letter of 28th December, I put the question, "Are we to suppose this gate (Bab Sitti Miriam) elevated 100ft. above the bottom of the wall, or does the rock break down suddenly from the gate towards the south, so as to form a deep gorge in which the pool is built?"

In order to settle this question, I sunk shafts on either side of the Gate of St. Stephen (Bab Sitti Miriam), and also in the road leading down to the Church of the Tomb of the Virgin, and find that the roadway at the gate is about 20ft. above the rock, and that going down the hill the accumulation of *débris* decreases from 25ft. in height to 2ft. or 3ft. This threw considerable light upon the subject, showing that there has been no great destruction of extensive building so far north as this gate, and that the spur of the hill running from the Burj Laklah to the Birket Sitti Miriam still continues to the south. Shafts were then sunk to east of the Birket Israil, and rock was found at a depth of 50ft. from the surface, being higher than the bottom of the Birket Israil by 40ft. As we find the natural rock in the Birket to the west at a little below this level, we are forced to the conclusion that the valley running south does not turn sharp round to the east in this

pool, but runs on through the Haram Area, and issues into the Kedron somewhat north of the Golden Gate.

I have placed on the accompanying tracing, the conjectural lie of this valley. That it is an important matter there can be no doubt, for on the proving of it may hang the destinies of most of the theories concerning the site of the ancient temple.

It is very mortifying just at this juncture to hear that the sum for excavations is to be curtailed still further. When I left England last June, I was told that my limit would be £300 per month; it has since then been reduced to £200, and now I hear you are compelled still further to reduce it, and even propose closing the works during the three summer months, just when the fellahs do most work, and Jerusalem is most quiet.

It is very desirable just now that we should proceed with the work with unabated vigour, and bring the question of the Haram Enclosure to a proper conclusion. A few more months' work here, and we may go forward confidently, and find the old walls of the city, having fixed the site of the temple.

We expend a great deal of wood in the shafts and galleries on the east side of the Haram Area. The shingle we pass through is often of such a nature that the frames cannot be taken out again. If it is possible to get up to the north-east angle, I propose examining it very minutely. We find the wall joining it to St. Stephen's Gate to rest several feet above the rock, the intervening space being partially filled up with concrete, and in one place at least the wall rests on the red earth. It is apparent that this wall is of no very ancient date.

Of the city wall to the east, this north-east angle of the Haram Area is the first sign from the northern end of anything ancient in appearance, and it will now be very necessary to ascertain whether the whole wall of the Haram Area to the east is built from the rock with bevelled stones; if it is, we can hardly doubt that the theory of De Vogüé is correct, and that the Haram Area is one vast platform of ancient date: if, on the other hand, we find the bevelled stones in the north-east angle only extend under ground as far south as they do on the surface, then we have the interesting problem whether this has been a tower, whether of Hananeel, as Dr. Barclay supposes, or of Meah, or the House of the Mighty (Nehem. iii. 1, 16; xii. 39). For if it should be decided that the Haram Wall at the south-east angle is of the time of the Jewish kings, we can scarcely give a more recent date to this wall at the north-east angle, provided we find it to be built up of bevelled stones from the rock.

THE

PALESTINE EXPLORATION FUND.

PATRON.

HER MAJESTY THE QUEEN.

OFFICE—9, PALL MALL EAST, S.W., LONDON.

Reports on Progress of Works at Jerusalem and elsewhere in the Holy Land, by Lieutenant Warren, R.E.

XLIII.

11*th June*, 1869.

Interesting Discovery at the N.E. angle, Haram area.—We have, during the last few days, succeeded in driving a gallery up to the great block of masonry forming the north-east angle, and have found the wall to be built of great bevelled stones to a depth of at least 60ft. below the surface, and we have not yet come on the rock.

In my last letter I expressed some diffidence about our being able to get across, on account of the treacherous nature of the soil, although we were then only 50ft. off. By employing a different shape of gallery frame, and keeping a non-commissioned officer continually at the head of the gallery fixing them, we have been able to surmount these difficulties, and are now likely to make a great addition to our knowledge of the ancient topography. Already we have made a happy commencement.

We struck the Haram Wall about 18ft. south of the north-east angle, and at a depth of about 32ft. below the surface. We then turned north, and ran along the Haram Wall for 26ft. without finding any angle similar to that above. At this point a slit about 18in. wide and 4in. high was observed in the Haram Wall, formed by cutting out parts of the upper and lower beds of two courses. A stone, dropped down this slit, rolled rattling away for several feet.

It was some time before I could believe that we had really passed to the north of the north-east angle; but there can now be no doubt of it, and that the ancient wall below the surface runs several feet to the north of the north-east angle without break of any kind.

If the portions above ground are *in situ*, it would appear that this angle is a portion of an ancient tower reaching above the old city wall,

probably somewhat similar to the view De Vogüé gives of it (Plate xvi., "Le Temple de Jerusalem").

We have this morning examined the slit mentioned above. At first it was impossible to squeeze through, but after a few hours it became easier, though it is now only 7in. in height.

The passage in from this slit is difficult to describe: the roof falls by steps, but the floor is a very steep smooth incline, falling 12ft. in 11½ft., like the slit and shoot for letters at a post-office. The shoot ends abruptly, passing through the roof of a passage. This passage runs east and west; it is 3ft. 9in. high, and about 2ft. wide; it runs nearly horizontally, and at its eastern end opens out through the Haram Wall. At the western end it goes (by measurement) to the east end of the Birket Israil, but is closed up by a perforated stone. This passage is 46ft. (?) in length. On the south side of it, a little to the west of the shaft, is a staircase cut in the masonry, and running apparently to the surface, but it is jammed up with stones. The roof of the passage is about 48ft. below the surface. The stones forming it are of great size, but do not show large in comparison with those of the sides, which are from 14ft. to 18ft. in length, and vary from 3ft. 10in. to 4ft. 6in. in height. To the west of the staircase the bottom of the passage slopes down rapidly, so that in one place it is 12ft. in height. The roof also is stepped down 4ft., about 11ft. from the western end.

Altogether this passage bears a great resemblance to that which we found under the Single Gate, October, 1867.

At the eastern end, where the passage opens out through the Haram Wall, a rough masonry shaft has been built round, so that we can see a few feet up the wall, and about 7ft. down it below the sole of the gallery. It is evident that here there has been some tinkering at a comparatively modern date.

In the course forming the sole of the passage there is a water duct leading through the Haram Wall, about 5in. square, very nicely cut; but in the next course, lower, a great irregular hole has been knocked out of the wall, so as to allow the water to pass through at a slightly lower level, and so run into an aqueduct 9in. wide and 2ft. high, which commences at this point, and runs nearly due east from the Haram Wall. All this botching and tinkering looks as if it had been done quite recently, and the workmen have left their mark on the wall in the shape of a Christian cross, of the type used by the early Christians, or during the Byzantine period.

At the further end of the passage, to west, the same large massive stones are seen until the eye rests upon a large perforated stone closing it up. This is the first approach we have yet found to any architectural remains about these old walls (which I believe now are admitted to be of the time of the Kings of Judah), and though it merely shows us the kind of labour bestowed upon a concealed overflow aqueduct, still it has a bold and pleasing effect, and until something else is found, will hold its own as some indication of the style of building at an early period.

It consists simply of a stone closing up the end of the passage, with a recess or alcove cut in it 4in. deep. Within this recess are three cylindrical holes, 5¼in. in diameter, the lines joining their centres forming the sides of an equilateral triangle (see sketch, plan, and section). Below this appears once to have been a basin to collect the water; but whatever has been there, it has been violently removed. It appears to me probable that the troops defending this portion of the wall came down the staircase into this passage to obtain water.

At first sight this passage appears to be cut in the rock, as stalactites have formed all over it, and hang gracefully from every joint, giving the place a very picturesque appearance. It seems probable that we are here some 20ft. above the rock.

There can be little doubt that this is an ancient overflow from the Birket Israil, which could not at that time have risen above this height, about 235°, or 25ft. above the present bottom of the pool, and 60ft. below the present top of the pool.

It is also apparent that the Birket Israil has been half full and overflowing during the Christian period, and that for some purpose or other the water was carried away by an aqueduct to the Kedron Valley. At the present day, when there is such a dearth of running water in Jerusalem, it is rather mystifying to find that within our era the Birket Israil has probably been constantly full up to a certain point, and flowing over.

It will be a great mistake now if we have to stop this work for want of funds. We have got over to this N.E. angle with considerable trouble and at great risk, and it is highly probable that difficulties would be put in the way of a second excavation at this point.

If the excavations are to continue, I am convinced it is essential that we should strain every nerve to get sufficient funds to complete this work.

XLIV.

18*th August*, 1869.

N.E. Angle of Haram area (*continued*).—We have now made further progress at this angle, and have settled several points of considerable interest.

1. We find that the tower (so-called tower of Antonia) at the N.E. angle of the Haram area, forms part of the main east wall, and, at near its base, the wall and tower are flush, or in one line.

2. The wall is built up of bevelled stones from the rock, but up to a certain height (nearly the same as at Robinson's Arch) the stones have rough faces.

3. The rock, which is only twenty feet below the surface at the St. Stephen's Gate, falls rapidly past the tower, so that at the southern angle the wall is covered up with *débris* to a depth of no less than one

hundred and ten feet, and the total height of the wall is over one hundred and fifty feet.

4. There is now no doubt that the valley at the Bab az Zahiré passes down through the Birket Israil into the Haram area, and thence out to the east between the N.E. tower and the Golden Gate: and that the platform of the Dome of the Rock is at least *one hundred and sixty-five feet* above one part of the valley in the northern part of the Haram area; and also that the contour trace showing the conjectural lie of the ground in the northern part of the Haram area, forwarded in June, appears to be nearly generally correct.

5. Some characters in red paint have been found on the bottom stones of the Haram wall under the southern end of this tower: a trace is enclosed.

6. It appears probable that the four courses of bevelled stones of this tower, which appear above ground, are *in situ*, and also in the wall south of the tower, but of this latter it does not seem so certain.

7. The faces of the stones below a certain line are described as rough (in paragraph 2), but they are quite unlike the roughly-faced stones at the S.W. angle. The faces project from two to *twenty* inches or more, presenting a very curious appearance.

8. The stone used does not seem to be so compact and hard as that used at the S.E. angle, and the chisel working is not so carefully done.

The manner in which the tower becomes flush with the wall is very interesting: for the first forty-eight feet above the rock it is one wall, the stones being carefully drafted, the faces projecting irregularly, on an average ten inches. The upper and lower parts of the faces are horizontal, and the sides are vertical, so that they in some instances present the appearance of one cube stuck on to a larger one.

The wall throughout this distance has a batter formed by each course receding 4½ inches from that below it, up to course Q, where the projecting faces end; here the tower begins, and it is formed by the portion forming the wall continuing to recede from 4 to 7 inches, while that forming the tower only recedes about 1¼ inches, so that at 70 feet from the bottom (level of the gallery), and 22 feet from whence the tower begins, the projection is nearly 2 feet. If this were continued at the same rate up to the surface, another 40 feet, it would give to the tower a projection very similar to what is has, viz., about 7 feet; from thisit would appear as though the upper were *in situ;* but it is to be remarked that the stones in the *wall* at the surface, and also in the gallery, have projecting faces, and as the southernmost shaft was sunk at the junction of the tower and wall, it yet remains to be seen whether the *wall* throughout is composed of stones with projecting faces, while the stones in the tower are like those at the Wailing Place.

It is also to be remarked that the level of the point where the tower commences is only a short distance below the surface at the S.E. angle, where there is a check in the wall as if just such another tower were commencing.

De Vogüé's view of the temple of Jerusalem restored, appears to give

an approximate view of what the east wall of the Haram is *at present*, except that the centre tower is not known.

There is no straight joint between the tower and wall at the N.E. angle; it is one wall for the 22 feet we have examined, and probably continues the same up to the surface. Where the projection increases to 2 feet, the stones are cut out to that depth, but a few feet higher some other method must have been adopted.

I propose after the summer to drive the gallery 100 feet further to the south along the wall, and then to sink again in search of the bottom of the valley, which is likely to be some thirty or forty feet lower down: as it is, this shaft at the angle of the tower is the deepest yet sunk, the bottom being 110 feet below the surface.

I have left this shaft open, so that M. de Saulcy may have an opportunity of examining the wall if he arrives in time.

(The detail of this work will be sent next mail, with plans.)

XLV.

18*th August*, 1869.

Conclusion of the Excavations at the South-West Angle, Haram area.—Three shafts, during the spring, were sunk alongside the south wall of the Haram area, west of the Double or Huldah Gate; it was also considered desirable to sink two other shafts alongside the west wall, near Robinson's Arch, but the family of Effendis, who own this portion of the ground, and who gave Captain Wilson trouble in 1866, again displayed so much greed, that while they were holding out in expectation of securing an exorbitant *bakshish*, it was found more convenient to examine the wall from a lower level without troubling them.

We have now as much information with regard to this portion of the Haram Wall as we are likely to be able to obtain, and the results are important, very important, for they establish the fact that the south wall east of the Double Gate (about 600ft.) is of a different construction to that portion west of the same gate (about 300ft.), the eastern portion appearing to be the most ancient.

That we can arrive at any immediate definite conclusion as to the position of the Temple from the establishment of this point, does not appear to be probable. It certainly is curious that we should find the portion of the south wall to east of Double Gate to coincide nearly in length with the width of the outer court of the Temple as given by Josephus; that it should be built up *from the rock* with bevelled stones, whose faces are finely dressed, and in this differing from the Haram Wall examined at the south-west and north-east angles, where the faces of the stones for some distance above the rock are left rough; that we should find the south-west angle and east wall to north to be apparently of less ancient construction, and so far agreeing with the description of the

extension of the Temple of Herod to the north and west (Josephus, "Wars of the Jews," v. v. i., and i. xxi. i.); that we should have found signs and characters on the stones at the south-east angle which were evidently written and cut before the stones were laid, and which are pronounced to be Phœnician; that we should have found under the Single Gate (of Ordnance Survey plan) a passage for carrying into the Kedron some liquid, and which is wholly distinct from the water channels under the Triple Gate. We have these, then, and many other indications of the Temple having been at this south-east angle, and yet we have against it arguments which appear to be so strong, that at the present moment there appear to be almost equal reasons for placing the site of the Temple on the three points indicated in a previous letter, viz., 1. Coinciding nearly with the present Dome of the Rock platform. 2. To the east of No. 1, and reaching up to the east wall. 3. At the south-east angle.

The finding of this wall to be of different constructions east and west of the Double Gate, makes it appear improbable that the Temple could have been at the south-west angle.

Between the south-west angle and the Double Gate, four shafts in all have been sunk, viz., the first at 90ft. from south-west angle (described in Letter XII., 22nd October, 1869); the second at 64ft. 6in. from south-west angle; the third at 213ft. from same angle; and the fourth at the south-west angle itself.

Before describing the three latter, some remarks on the south wall may be required.

The south wall of the Haram area, 922ft. in length, is broken into nearly three equal portions by the Triple Gate to east, and the Double or Huldah Gate to west. At the present time the surface of the ground runs nearly level from the south-west angle to the sill of the Triple Gate, and then shelves down about 22ft. to south-east angle; but in earlier times the wall must have presented a very different appearance, for the rock of Mount Moriah, which is found within a foot of the sill of the Triple Gate, shelves down rapidly to the south-east angle, falling over 100ft. in 300. Towards the west from the Triple Gate the rock falls more gently; at the Double Gate, whose sill is on a level with that of the Triple Gate, the rock is probably at a depth of 30ft.; it then falls more rapidly to about 90ft. from the south-west angle, where appears to be the bed of the Tyropœon Valley—this point is 90ft. below the sill of the Triple Gate; the rock now rises again rapidly to west, having risen about 30ft. at the south-west angle.

From the examination of this south wall, in nine separate places, there appears to be no doubt that the whole of the stones below the present surface are bevelled or marginal-drafted, though the faces are not all finely dressed, and that they are *in situ*, although, as previously observed, the portion of the wall to the west of the Double Gate appears less ancient than the remainder.

As the rock is found at the sill of the Triple Gate, it follows that we can have no course of stone running through from end to end below

that level. The first through course has its bed on a level with the sole of the Triple Gate: it is nearly double the height of the courses below, being from 5ft. 10in. to 6ft. in height (see Letter XXVIII., 2nd September, 1868), while other courses vary from 3ft. 4in. to 3ft. 10in. It extends in a broken line from the S.E. angle to the Double Gate, the S.E. corner-stone being the heaviest, but not the longest, yet found in the Haram Wall. Were the south wall of one construction, we ought to find this large course running through west of the Double Gate, but we have searched for it in vain. At the first and third shafts it is difficult to determine whether the stones on a level with this great course are bevelled or not, and therefore they give no information; but at the second and fourth we find bevelled stones apparently still *in situ*, at a higher level than the great course, and yet we find no signs of the great course itself. We have certainly a large stone at the S.W. angle, the longest (38ft. 9in.) at present known, but it is only 3ft. 3in. to 3ft. 6in. in height, and its bed is about four feet above that of the great course; it is, then, apparent that this great course did not reach so far as the S.W. angle, or in other words, that this western portion of the south wall is of a different construction to the eastern. We find this again to be the case when we examine the walls to their foundations, for at the S.E. angle and at the Single Gate we find the wall springing from the rock, with the faces nicely worked, while at the S.W. angle, and for at least 213ft. to east of it, we find the stones up to a certain level, with beautiful marginal drafts, but with rough picked faces; and the line where these rough stones end, and the smooth-faced stones commence, is on a level nearly with the pavement on which the *débris* of Robinson's Arch rests. We have said that the rough stones are found along the west wall under Robinson's Arch, up to the level of the pavement, and it appears probable that they continue with the pavement up to Barclay's Gate. If so, it gives the impression that the portion of the wall west of the Double Gate, and round by the S.W. angle to Barclay's Gate, was constructed after the Tyropœon had commenced to fill up, and that the lower portion, the rough stones below the pavement, were never exposed to view. In Josephus, "Wars," v. v. 1, we find: "The lowest part of this was erected to the height of three hundred cubits, and in some places more, yet did not the entire depth of the foundations appear, for they brought earth and filled up the valleys, as being desirous to make them on a level with the narrow streets of the city." This passage can only apply to two sides of the Temple, the west and the north, for on the south there is no valley near, and on the east is the Kedron, the apparent bottom of which is still considerably lower than the actual bottom of the walls. Now it is just on the south-western side (and north-eastern) that we find these roughly-faced stones reaching up to a certain level; and finding a hard, well-squared, marble (*mezzeh*) pavement also running along at the level, we may fairly conclude that this was the line of surface at some time after the construction of the S.W. angle, and we may also infer that it was the *first* surface used after the S.W. angle was completed,

and that the roughly-faced bevelled stones below were never intended to be exposed to view.

At the S.E. angle, and along the south walls up to Triple Gate, we find the smooth-faced stones are continued down to the rock, and it appears that when this portion of the wall was built there was a *débris* at this point of only twelve feet in depth.

At the S.W. angle, and for at least ninety feet along the south wall, we have found a second and less ancient pavement. It is about twenty feet above the first pavement, and about twenty-three feet below the present surface; it is nearly on a level with the sill of Barclay's Gateway, and with what appears to have been an old surface under Wilson's Arch. This pavement appears to have been used after the destruction of Robinson's Arch, and before the building of the present Wilson's Arch.

It was under this pavement that the signet "of Haggai, the son of Shebaniah" was found in 1867; and in another shaft at the S.W. angle, we have found several fragments of pottery at a depth of about five feet below the pavement. Among the fragments are several Greek lamps, one of which has an inscription of Christian origin, similar to those on lamps which have been considered to be of the third or fourth centuries. These fragments may, to a certain extent, help us in ascertaining the age of this pavement. No arrangement in the laying of these pieces of pottery was noticed: they had the appearance of having been lying in the position in which they were found when this upper pavement was laid, and if so, we must suppose it to have been made after the third or fourth century. It appears possible that this may have been the level of roadway leading under Wilson's Arch, and through the present Dung Gate, spoken of in the Norman Chronicle (see Williams's *Holy City*); also there is to be seen a line of road under Wilson's Arch along the west wall of the Haram area on the plan of Jerusalem in the twelfth century given in Fergusson's article on Jerusalem (*Smith's Dictionary*). It has been observed in a previous letter that the west walls of the Haram area at Robinson's Arch cut through an ancient system of water ducts and tanks running along the western side of the Tyropœon Valley. The long aqueduct which is described in Letter X. (11th October, 1867,) and which commences abruptly at the South Haram wall, was found to follow the bed of the Tyropœon for several hundred feet, and was probably also cut through at the construction of this wall.

If we are to suppose that the roughly-faced stones at the south-west angle were never exposed to view, we must presume also that the two apparent voussoirs lying on the aqueduct under Robinson's Arch belonged to a bridge which crossed the Tyropœon Valley previous to the building of the Haram Wall at the south-west angle (see Letter XXXVI., 12th January, 1869). It is to be remarked with reference to the roughly-faced stones that their joints and marginal drafts are quite as perfectly wrought as those to be found on the stones whose faces are finely worked.

The present surface of the ground between the south-west angle and the sole of the Triple Gate is now nearly on a level (2,380ft.), from thence it shelves down to a level of 2,356 at the south-east angle. As previously observed, a great course of stones runs between the south-east angle and Double Gate, partly broken away in a few places: above this great course no bevelled stones are to be seen except a few, apparently *in situ*, just at the south-east angle. As the bed of this great course is on a level with the floor of the great vaulted substructures inside the Haram area at south-east angle, it can readily be seen that the original substructures are not likely to have remained after the retaining walls to east and south had been destroyed, and that, therefore, the present substructures are likely to be less ancient than the great course and lower portions of the old wall, which still remain *in situ*.

Between the Double Gate and the south-west angle, bevelled stones are only to be seen above the present surface for 90ft. from the south-west angle; for this distance four bevelled stones are to be seen above the level of the spring of Robinson's Arch; they then suddenly break away, and are succeeded between this and the Double Gate by several courses of large squared stones, which are jointed on to the bevelled stones in a very irregular manner. (See Captain Wilson's Plates, O. S.) The top of these squared stones ends in a line with the top of the upper bevelled stones, and above them there are courses of stone of a smaller size. These squared stones vary in height, some courses being more than 4ft.; they are not laid very skilfully, the lines of the horizontal joints having a wavy appearance, and in one case a course commencing at one end with a height of 4ft., gradually runs out in 200ft. to a height of 3ft. 4in. This, however, is not a feature confined to the newer or squared work, it frequently occurs in the bevelled stones; for example, the stone at the south-west angle, 38ft. 9in. in length, is 3ft. 3in. high at northern end, 3ft. 4in. at centre, and 3ft. 6in. at south-west angle.

There appears to have been a considerable want of attention in the reconstruction of the wall at the south-west angle, for the joints between the squared stones are found to act as weepers. The wall is very much disfigured by the deposit left by the running water.

A diagram showing all the shafts sunk round the walls of the Haram area is forwarded; from this it will be seen that the courses from Wilson's Arch appear to run through as far as the Double Gate, though there are slight discrepancies in height of the stones in each course at the several points where they were measured.

It is curious to find that from Barclay's Gate to Wilson's Arch, the bevelled stones have their faces finely worked, while so near to the south of Barclay's Gate there are stones at a higher level which have their faces quite rough; perhaps some reason for this may be suggested, it is difficult to see why this change should exist.

Descriptions of Shafts sunk alongside South Wall near S.W. Angle.—The second shaft commenced at a point 64ft. 6in. from S.W. angle; the surface of the ground is here about the middle of course E. The first

No. III. (I. and II. in "Quarterly Statement" No. II.)—Return showing the height of courses of stone in the Haram Wall, as exposed in the several shafts. A thick line in each column marks the present surface of ground.

No. or letter given to each course.	Wilson's Arch.	Barclay's Gateway.	South-west Angle.	64ft. 6in. east of S.W. Angle.	90 ft. east of S.W. Angle.	213 ft. east of S.W. Angle.	West of Triple Gate.	Triple Gate.	Single Gate.	South-west Angle.	South end of Tower, N.E. Angle.	N.E. Angle, 19ft. to south	Remarks.
	1	2	3	4	5	6	7	8	9	10	11	12	
	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	
8	...	3 5					...	...	...	...	...	...	
7	...	2 5					...	...	...	...	...	...	
6	...	3 10					...	...	...	...	3 $7\frac{1}{2}$	3 $7\frac{1}{2}$	
5	...	3 6	C 22	C 20	C 19	C 21	...	...	...	...	3 10	3 10	
4	3 $4\frac{1}{2}$	3 4					...	...	...	...	3 $1\frac{1}{2}$	3 $1\frac{1}{2}$	
3	...	3 6					...	...	...	...	3 9	3 9	
2	3 6	6 10	...	...	...	...	...	...	...	...			
1	3 3	Lintel	3 $2\frac{1}{4}$	3 $2\frac{1}{2}$	3 2	3 2	...	...	...	...			Level of bottom of lintel, Barclay's Gate, 2398f. 5i.
A	2 6	3 5	3 4	3 3	3 3	3 3	...	...	...	...			
B	3 6	3 8	3 $4\frac{1}{2}$	3 $6\frac{1}{2}$	3 $6\frac{1}{2}$	3 $5\frac{1}{2}$	...	...	...	...			Bed of B springing of Wilson's Arch 2391f. 5i.
C	3 6	3 7	3 7	3 6	4 0	3 4	...	...	...	...			Bed of C springing of Robinson's Arch 2388f.
D	3 4	3 3	3 6	3 4	3 $9\frac{1}{2}$	3 $10\frac{3}{4}$	...	...	...	...	Not seen.	Not seen.	
E	3 $9\frac{1}{2}$	3 8	3 8	3 $6\frac{3}{4}$	3 $2\frac{1}{2}$	3 2	5 10	5 $9\frac{1}{2}$	5 11	6 1			Bottom of great course, Triple Gate, 2380 ft.
F	3 $8\frac{1}{2}$	3 $8\frac{1}{4}$	3 $7\frac{1}{2}$	3 $7\frac{3}{4}$	3 0	2 $10\frac{1}{2}$	—	Great	course.	—			
G	3 8	3 8	3 $6\frac{1}{4}$	3 $5\frac{1}{2}$	3 9	3 9	3 6	Rock	3 $5\frac{1}{2}$	3 $5\frac{1}{2}$			
H	3 9	3 $9\frac{1}{2}$	3 $8\frac{1}{4}$	3 $6\frac{1}{2}$	3 9	3 9	3 9	...		3 $9\frac{1}{2}$			Bed of I, sole of Barclay's Gateway, 2366ft. $4\frac{1}{2}$in.
I	3 3	3 $4\frac{1}{2}$	3 $6\frac{1}{2}$	3 4	3 9	3 8	3 9	...	Not seen.	3 9			
J	4 1	Not seen	4 0	3 11	3 8	3 8		...		3 $8\frac{3}{4}$		3 4	Bottom of course J in columns 11 and 12, 2363ft. 3in.
K	3 11	7 $8\frac{1}{2}$	3 $10\frac{1}{2}$	3 11	3 9	3 $3\frac{1}{2}$		...		3 $8\frac{1}{2}$	3 5	3 $5\frac{1}{4}$	

L	3 11½	3 10¼	3 10	3 10	3 9	3 6		...	Opening	3 9	3 4½	3 6	{ Bottom of course L at S.E. angle, 2357 ft.
M	3 10	3 9¼	3 9	3 9½	3 6	3 8¾		...	3 8	8 8	3 5	3 5	
N	3 9	3 11¼	3 8¼		3 11	3 10		...	Opening to	3 9	3 5	3 9	
O	3 9	3 6¾	3 4		3 8	3 4¾		...	channel	3 9	3 5	3 9¼	
P	3 6	3 6½	3 9		3 9	3 7½		...	3 9	3 9	4 0	4 0	
Q	2 10½	3 5			3 9	3 6		...	3 9	3 9	4 0	3 11¼	
R	Rock	3 6½				3 9		...	3 9	3 9	4 0	3 4¼	
S	...	3 6				3 8¼		...	Rock	3 9	3 2¼	2 10	
T	...	3 5½				4 0		...	...	3 8	3 0½	3 5½	N.B.]—This return
U	...	3 7½				3 8¼		...	...	3 9	3 4½	In rock	and the accompanying
V	...	2 5½				Rock		...	...	3 9	3 4½	Rock	diagram cannot show
W	...	Rock at 2320 1				...		...	...	{ Not seen }	4 0	...	the perpendicular measurements taken in each shaft, from surface to rock, etc. For this reference must be made to the detail plans of each excavation
X	...	...				...		...	...	3 6½	...		
Y	...	...				...		...	...	4 6	3 11	...	
Z	...	...				...		...	...	4 0	3 1¼	...	
a	...	...				...		...	...	4 0	2 11	...	
b	...	...				...		...	...	3 6	2 10½	...	
c	...	...				...		...	...	4 2½	3 1½	...	
d	...	...				...		...	...	3 7½	2 10¾	...	
e	...	...			Rock	...		...	...	4 2½	2 7¼	...	
f	...	...			2290 ft.	...		...	...	4 3½	Rock	...	
g	...	...			...	...		...	...	3 8	...	...	
										Rock 2272 2½			

Not continued to rock. | Not continued to rock. | Detailed measurement mislaid. | Not continued to rock.

NOTE.—A wavy line in columns 3, 4, 5, 6, 11 and 12, show where the rough-faced stones join the smooth-faced. The four upper stones in column 2, and the stones above the surface in columns 5 and 6, are not bevelled; all other dimensions in this return refer to bevelled (marginal-drafted) stones.

To understand thoroughly the *relative* positions of the courses, &c., in the Haram Wall, this return must be examined in connection with the accompanying Diagram* drawn to scale ($\frac{1}{120}$), because the height of courses does not correspond all round the Haram area. The courses in columns 1, 2, 3, 4, 5 and 6 appear to be of one construction, in columns 7, 8, 9 and 10 of another, and in 11 and 12 of another.

The levels are given in feet above mean-sea level of the Mediterranean, as obtained from the B.M. placed by Captain Wilson in the streets of Jerusalem.

19*th August*, 1869.

CHARLES WARREN, Lieut. R.E.

* This arrived too late for lithographing.

three courses below the surface are bevelled but much worn; at a depth of 15ft. 6in. a rough pavement was met with, stones about 12in. cube; below this pavement the stones are well preserved until at 29ft. 6in., at bottom of course M, the bevelled stones with rough faces commence; this shaft only exposed course N.

The third, 213 feet from S.W. angle.—Level of surface of ground nearly at bed of course F; found a rough wall butting on to the Haram Wall, very difficult to get through; bevelled stones in bad preservation; at depth of 25ft. arrived at the upper course (N) of roughly-faced stones, continued down to the rock, which was reached at a total depth of 54ft. 10in.; rock cut smooth for the foundation-stone.

The fourth, at S.W. angle, on S. side.—Level of soil at bed of course D, bevelled stones very well preserved; at 23ft. met with a stone pavement; at 25ft. came upon some Christian lamps, one with a Greek inscription—stones of wall very well preserved below pavement; at 38ft. came upon a second pavement, the same as that under Robinson's Arch; at 42ft. came upon the roughly-faced stones at course Q; drove a gallery for 6ft. round the angle to examine the roughly-faced courses.

Gallery under Pavement at Robinson's Arch.—This was driven in from the shaft at Robinson's Arch for the purpose of examining the west Haram Wall; the result of the examination is that the line of smooth-faced stones ends at the pavement under Robinson's Arch, and that below this pavement the stones are roughly-faced.

It is to be remarked that the smooth-faced stones above the second or upper pavement are found in much better preservation than those below it, which appear to be quite unworn; this would rather imply that this upper pavement was laid only a comparatively short time after the building of the Haram Wall at this angle.

THE

PALESTINE EXPLORATION FUND.

PATRON.

HER MAJESTY THE QUEEN.

OFFICE—9, PALL MALL EAST, S.W., LONDON.

Reports on Progress of Works at Jerusalem and elsewhere in the Holy Land, by Lieutenant Warren, R.E.

XLVI.

Excavations at the North-East Angle of the Haram Area.—The general results of these shafts have already been noticed in Letters XLII., XLIII., and XLIV., and now the details of the working are given.

In commencing work here we were completely in the dark as to the nature of the rock below the surface; we certainly were aware of the valley running down from the Bab-as-Zahiré, but it was generally supposed to run out through the Birket Israil, turning sharp to the east, as shown in the Ordnance Survey Plan 1·10,000: instead of continuing in a south-easterly direction through the north-east corner of Haram Area, as our excavations have shown it to do: we therefore found it necessary to sink several shafts so as to completely mark out the present lie of the rock; and it is to be remembered that the present lie of the rock gives very nearly the features of the ground as they appeared in early times, for it can hardly be doubted but that in those times the rock about here was nearly bare; covered at the most with 2ft. or 3ft. of red earth.

Wherever we have excavated we have found the rock at bottom of our shafts to be cut away in steps, or levelled, or otherwise showing that the hand of man had been applied to it; and on this rock we generally find 2ft. or 3ft. of red earth (the natural colour of the soil of this part), and all above it is stone-chippings and shingle mixed up with pieces of red pottery, a black earth formed of rubbish from the city.

The following remarks are made on the supposition that the contour trace of supposed lie of rock 1·2500, the elevation of the east wall of Haram 1·120, and the sections through the east Haram Wall at north-east angle are before the reader.

It is also to be observed that in giving these details no account of the actual working is given, as this, though interesting in itself, would prevent the results being readily accessible; in this account one shaft is said to be tamped up and then another commenced, while in fact, whenever convenient the earth taken out of one was used for filling up another, so that at No. 10 shaft, no soil had to be taken up to the surface after we had once reached the wall, though we have been working them for many weeks.

In giving the details, also, the shafts have not been taken consecutively or by the date of commencing, but with regard to their positions one to another.

One important point these excavations have established, viz.:—that outside the city wall on east to north of St. Stephen's Gate there are only a few feet of *débris*, and often none at all, while immediately south of it, and indeed all along to the south-east angle, the *débris* varies in depth from 50 to over 100ft; this rather implies that to the north of this gate there has been very little destruction of old walls.

Another important point with regard to the city wall at this gate is, that the present wall only goes down for 10ft. below the surface, and there rests upon 10ft. of concrete, which again is on the rock, and that there is no appearance of an older wall.

From this it would appear that the St. Stephen's Gate may not stand upon the site of the old wall; and the line of bevelled stones found in drain at shaft No. 10 may mark the place where the old wall turned in to the west. This idea is rather confirmed by our finding the Haram Wall running north from the north-east angle for at least 64ft., so that if it continued far enough in the same straight line, it would lie under the St. Stephen's Gate nearly.

We come now to a question of very great interest in the East Haram Wall north of the north-east angle. We found an overflow aqueduct at a level of 2,341ft., while the present level of the Haram Area at same angle is 2,410ft. This aqueduct forms part of the old Haram Wall as seen at this angle, and every detail about it points to its having been used as a fountain or overflow aqueduct, and not as a floodgate; and if we admit this, we must suppose the water in the Birket Israil to have stood at the highest at 2,415ft. at the time the present north-east angle and north-east portion of Haram Wall was built. If this be so, and if we might suppose the present northern end of the Haram Area to have been built up to same height as it does at present, when this north-eastern wall was built, then, we ought to find southern side of the Birket Israil built up of the same kind of blocks as this wall.

Now we find the inside of the Birket Israil faced with stone and plaster, so as to act as a tank up nearly to the level of the Haram Area, and what may be the true face of the north Haram Wall may thus be covered up. The removal of a few stones here might settle this question. This question may thus be described.

Some authorities make the limits of Herod's Temple to have extended up to Birket Israil on north; now we have found the northern part of east wall to be apparently *in situ*, whether it be the wall of Solomon, Herod, or Herod Agrippa. If of Herod then the south side of Birket Israil should also be of like stones.

In shaft No. 11 we have found a massive wall of bevelled stones, apparently not *in situ*. This may have been at a later period the line of the city wall; certainly it appears to be later than the aqueduct which it cuts in two, and which appears to run up to St. Stephen's Gate, shaft No. 10, for this aqueduct is on a level and does not appear to have been made until the Birket Israil was made into the tank it appears at present.

Shaft 1.* Commenced 2nd April, 1869, at a point at the foot of the mound of rubbish outside St. Stephen's Gate, where some Christians say tradition places the site of an ancient church.

Surface 2,343ft. above sea-level. Rock was found at depth of 6ft., it sounded hollow, and on striking with a jumper, caved in, and a grotto was exposed to view, nearly circular on plan, about 9ft. in diameter and 4ft. high; it had been used as a tomb, and is divided into five loculi by plaster partitions about 3in. thick and 12in. high; two of these lay about north-east to south-west, and three north-west to south-east.

At the southern side a shaft leads down into a chamber (No. 2) 26ft. long, 6ft. broad, and divided latitudinally into ten loculi, separated as in the chamber above; one of the middle loculi serves as a passage, opening at either end into two chambers (Nos. 3 and 4) parallel and similar to No. 2; these are also divided into loculi.

Other chambers open out from these; the largest being at the south-east angle of No. 3, where there is a shaft (about 6ft. deep) leading down into a lower range of chambers, in direct length about 40ft. All these chambers, nine in number, are divided off into loculi, except one which appears to have been an ante-room, and in which some pieces of cut stone were found.

The partitions separating the loculi in some cases are cut out of the rock. The chambers were found half full of earth, fallen in from above, and it is evident that they had been opened, and perhaps used, at a period subsequent to the time when they had been used as tombs. The earth was moved from one chamber into another, but we found no indications of passages into a larger grotto, the only places not explored were some shafts leading up, apparently, to the surface.

The work was continued for twenty-four days. Six pottery lamps, apparently early Christian, and some glass vases were found, these were sent home in a box under charge of Corporal Ellis.

The chambers are cut in the "Malaki" of a very rotten description, nearly approaching to the Cakooli, and no chisel marks were found on

* The numbers are not Captain Warren's.

the rock. The system of chambers with shafts leading up to surface is somewhat on the plan of the Greek or Phœnician tombs at Saida.

A plan of some of the chambers, and a section, are enclosed; the whole system is not given, as they lie over each other, and are cut so irregularly as almost to suggest the idea that they may have been natural caverns enlargened by man.

Shafts 2, 3, were two shafts sunk at the bottom of the road, due east of St. Stephen's Gate; rock was found in each at 5ft. 6in. and 2ft. respectively; at the first (H. 4) the last 3ft. 6in. was of the red virgin soil. Shafts were now commenced higher up the road leading to St. Stephen's Gate.

Shaft 4. Commenced 9th April, 1869, was sunk near the road 256ft. east of the gate; at 14ft. a small aqueduct or cistern was broken into, about 4ft. 6in. square of masonry. Rock was found at 20ft. 9in., the walls of the cistern resting on it, the rock levelled. Soil for first 13ft. nearly black, in layers sloping from north to south for the first 11ft., and then from west to east to a depth of 14ft., slope two in three; below this the colour was red, and continued so for 6ft. to the rock; level of surface 2,390ft. A shaft, H 8, was next sunk higher up near the road, at a distance of 162ft. from the gate; level of surface 2,409ft.

Shaft 5. Rock was found at a depth of 30ft. The top of a scarp facing to east; this was followed down 20ft. the rock receding under to west, apparently the side of a tank, as it was plastered and ended abruptly to north; large stones were found, as though they had been part of the vaulting of the tank; after getting to a depth of 50ft. below the surface this shaft was filled up. For the first 20ft. the soil was black and rotten, apparently rubbish from the city; from thence to the rock loam mixed with stones.

Shaft 6. Commenced 12th May, 1869, near road at 109ft. east of St. Stephen's Gate; level of surface 2,411ft. Rock found at 22ft. 9in. below surface, falling out one by one to south-east. At 16ft. colour of soil changed from black to a reddish brown. At 8ft. some pottery found. In consequence of the finding of the wall at No. 11, it was considered desirable to drive a gallery to west from No. 6 in search of continuation of the same.

Rock very soft and rises to west slightly; first 10ft. level, then 3ft. with rise of 3in. and then 2ft. level again; in all, 15ft. The rock is then scarped to west to depth of 8ft. 4in., is level for 10ft., and then rises again in a small scarp of 2½ft., and then goes on level again. Space of ditch filled in with small stones and earth. Total length of gallery to west 25ft. 8in. No signs of any wall as found at H. 9; but probably we were not near enough to west.

Shaft 7. Commenced 24th April, 1869; at the first angle in city wall, 43ft. north of St. Stephen's Gate; surface level 2,419ft.; wall below surface same as that seen above; at 18½ft. came on rock and concrete on which the wall rests; no signs whatever of anything more ancient than the present city wall, as seen above ground; soil passed through, a loose rubbish.

Shaft 8. Commenced 8th April, 1869, at a point 200ft. due east of the south corner of tower of north-east angle Haram Area. Rock, cut down level, found at 29½ft. Level of surface 2,347ft. Some broken pieces of fresco were found near the rock. Soil passed through was black for first 8ft., and then of a brown colour, with the appearance of water having passed constantly through it with lime in suspension. A gallery was now driven to south-west to determine the lie of the rock. Rock found to slope to south-east; after progressing 11ft., the gallery had to be tamped up on account of our striking a layer of loose stones with no earth among them, and which ran down in streams on being touched.

Shaft 9. Commenced 30th April, 1869, higher up the hill, and at a distance of 40ft. to west of No. 8. Level of surface 2,364ft. Sunk 23ft. through black earth and then came upon shingle from one to two inches cube, without any earth; shaft continued 20ft. deeper, when at a depth of 43ft. the shingle changed to a layer of stones from three to four inches cube, and in getting through these the shingle commenced to run and filled in the shaft for about a foot and a half; the shaft was then filled up till the bottom was 22ft. below the surface, and a gallery was driven in to west for 25ft.; a shaft was then sunk through stones 12in. cube, and mud. Rock found at 25ft., being 47ft. below the surface; rock falls one in four to south.

Shaft 10. Commenced 5th May, 1869, along city wall at first angle to south of St. Stephen's Gate, at a distance of 34ft. from the Gate. Level of surface 2,410ft. Bottom course of ashlar of city wall at depth of 11ft., resting on concrete formed of stones about 6in. cube, and hard lime; at depth of 20ft. found rock, the concrete foundation of wall resting on it: rock sloping to south about one in four. Shaft was then filled up to top of concrete and a sloping gallery driven to the south along city wall.

In gallery, at 19ft., came upon a stony rough masonry wall, lying east and west, about 3ft. thick, which did not reach up to city wall by 6ft.; within this wall to south was a pavement of rough tesseræ at a level of about 2,391ft. Sergeant Birtles suggests that this was perhaps the remains of a house, the space between the rough wall and the city wall having been the doorway. Just before reaching the rough wall, a masonry drain 7in. by 6in. in the clear was crossed below level of pavement.

At 38ft. the top of a barrel drain was crossed, and at 40ft. another rough wall, also large cut stones were found on east side, and bottom of gallery.

At 44ft. 6in. a shaft was sunk and rock found at 4½ft. below sole of gallery, being 33½ft. below surface of ground at mouth of shaft; the surface of rock therefore at this point is 2,377ft.

The top of the barrel drain was now examined; after going in 2ft. 6in. it ended, and another roof formed of flat stones at a rather higher level was seen, and after 8ft. the sides of an aqueduct running

west were visible, formed of large stones; for the first 10ft. this passage is only 10in. wide, and it then becomes larger (2ft. wide), the southern side being formed of large stones 3ft. 6in. high, and 4ft. 6in. long, well squared and exhibiting slight traces of a bevel; the aqueduct was traced for 39ft. in all, and was blocked up by a stone having fallen down from the roof. In the top, about 15ft. from entrance, a cylindrical earthenware pipe, 9in. in diameter, was built in, apparently to conduct water from a higher level; also two other pipes, about 4in. in diameter, were found laid horizontally *above* the stones forming the roof. The aqueduct was in a very decayed condition and not safe for the men to work in; it apparently leads from the Birket Israil at a level of 2,390ft., the bottom of the pool being 2,325ft. It is probable that it was constructed before the present city wall, but it has not the appearance of very great age, and the fact of the south side being composed of large bevelled stones rather goes to show that it was formed after the destruction of one of the old walls.

Shaft 11. Commenced 16th March, 1869, at a point about 100ft. to east of Haram Wall, a little north of the North-East Angle. Level of surface 2,405ft. At a depth of 42ft. an aqueduct was broken through, very rough, no plaster, roof formed by rough stones in form of an arch, runs in a north-westerly direction, directly for the aqueduct found in shaft No. 10. To the north-west 27ft. were open, and to south-east 20ft.

Shaft was now continued, and at 60ft. the earth changed colour and rock found at 64ft. from surface; cut in steps apparently for resting a foundation on. Falls to west about one in four.

The shaft was now filled up to level of aqueduct, and the clearing out of the portion towards the city wall was commenced. Passage 3ft. 6in. high, and 1ft. 9in. wide; stones forming sides and roof, 3in. thick and 6in. long, very rough.

At 32ft. found the passage broken in at sides; after securing this, it was found to continue and to be filled with hard silt. At 57ft. a very massive wall of bevelled stones running north and south, and 65ft. from city wall, was reached—stones well squared and somewhat similar to those found at the Jews' Wailing Place: course 3ft. 7in. in height. Commenced a gallery along the wall to the north; the second stone found was not bevelled, though well squared and dressed. At 18ft. from aqueduct, the gallery being driven horizontally, the rock was struck, and the lowest course of the wall took a turn about 30° to north-east, while the second course continued straight on to north; the wall now was composed of small stones, and after continuing it for 8ft. further, the gallery was tamped up by earth taken from a new gallery driven along wall to south.

Gallery continued to south along bevelled stones of wall; at 19ft. reached the corner stone, the wall now running to west. The stones here are very well dressed, but have a curious cracked appearance as if they had been subjected to great heat, and they broke off in large

chips when struck accidentally. Followed up the wall to west, and at 13ft. 6in. came upon what appeared to be part of a rough wall running to south, stones about 1ft. 6in. high, and 2ft. long. The main wall still went on to west, but was now composed of very rough irregular stones of large size; the gallery was now continued for 46ft. from the angle, when the wall suddenly ended, and after being continued for 7ft. farther, the gallery was stopped, and another gallery driven to south-west from the point (47ft. from angle) where the main wall had ended.

Continued gallery to south-west; progress impeded by meeting with a concrete floor composed of black cement and small stones; point where this floor was met with 29ft. from where the gallery branched. At 38ft. came close on point below north-east angle of Haram Wall, and broke into a gallery from No. 10. This was done for the purpose of tamping up No. 9 with the soil from No. 20, and so avoid taking it along the rough aqueduct, which had been an awkward business.

It does not appear that the stones of the massive wall in No. 11 are *in situ*, the stones differ in height, and sometimes a squared stone is interpolated; it is probable that this wall was built after the aqueduct had ceased to be of use, as we find it cut in two by the wall, that is to say, if we are to suppose it to be one and the same as found in Shafts Nos. 10 and 11.

Shaft 12. Commenced 24th April, 1869, at a point ninety-seven feet due east of north-east angle of Haram Area: level of surface 2,396ft. The soil at first was very good for working (black soil) to a depth of forty-two feet, where a rough wall was met with, running east and west. Below this, rough stones were met with, and the shaft proceeded with some difficulty to a depth of fifty-nine feet, when rock was met with: falls one in three to east. The shaft was then filled up to thirty-three feet from surface, and a gallery driven in towards north-east angle through very good soil for thirty-five feet. At this point the earth gave way suddenly in front of the frames for about nine inches, and down came a torrent of shingle, filling up the gallery for six feet.

It appears that the surface of the good earth falls *towards* the Haram Area, the shingle lying on top of it, there being again after a few feet of good earth another bed of shingle.

We now had to try back, and at twenty-nine feet from shaft turned the gallery sharp round to south, stepping it down each frame one in one, so as to get a few feet of good earth over our heads. After ten feet the gallery was turned round again towards the city wall, and gradually stepped up again: we were now again in most excellent soil, the best we had come across in Jerusalem; but there was still the chance of our meeting a break of shingle and being prevented reaching the Haram. Every effort was made to obviate any such accident; and Sergeant Birtles and Corporal McKenzie, putting in thirty frames in two days, arrived safely at the Haram Wall without encountering the dreaded shingle. What prevents progress in these galleries is not so much the

work at the head of the shaft, as the difficulty in making the men carry off the soil quick enough. A gallery was now driven along the Haram Wall to north; and at twenty-six feet the curious shaft leading to aqueduct was met with, described in Letter XLVIII.

The gallery along Haram Wall was continued to north beyond the *light-shaft* of this aqueduct; and the stones were found to continue bevelled and well cut for sixty-five feet, when they changed in character from being similar to those at the Jews' Wailing Place to those found near bottom of tower at north-east angle; the centres of the stones projecting from six to ten inches. These were examined for ten feet, and then the gallery was tamped up. It is to be observed that this wall was traced considerably beyond the point where the massive wall of H 9 should have come in, and therefore they appear not to be connected.

In the gallery to north a concrete floor was encountered, apparently ascending to north, at a distance of sixty-four feet. It was just here that the Haram Wall stones changed their character; and probably it may have been that the projecting faced stones were hidden beneath the concrete floor.

A shaft was sunk alongside the Haram Wall at the point where the gallery from No. 12 met the Haram Wall, 18ft. south of the north-east angle of Haram Area (as seen on surface). Level of bottom of gallery 2,363ft. 3in. Passed through black earth and stone about 12in. cube; at 17ft. came on stone chippings. Hitherto, in this shaft, the Haram Wall stones had the ordinary marginal draft; but at 21½ft. the first course of projecting faced stones was met with, the projection being 25in.

At 36ft. the rock was met with, having a very steep fall to south, and being cut in steps for the reception of the stones of the Haram Wall. Shaft tamped.

The gallery to south was continued until it reached the southern corner of the tower, which here only projects 2ft. (see Letter XLIV).; and here another shaft was sunk: level of bottom of gallery 2,363ft. Commenced 7th July, 1869. At first the soil was good, then some very large stones had to be broken through: at a depth 46ft. the soil became better to work in. The face of stone 14th course X (see section) was very faulty, and its irregularities were filled up with small stones and mortar, rendered on outside so as to look like stone (specimen of mortar kept). Along the top of Z course, which sets out 7½in., a small drain was built about 6in. by 5in. in the clear: it runs into a small cistern about 3ft. square and 6ft. high, the sides plastered, and top covered with a rough flat stone: depth of drain from bottom of gallery 52ft. 6in. The cistern lay to north of shaft, its western side about 1ft. 6in. from Haram Wall; the drain, 1ft. 4in. wide, enters at north-east angle of tank, and the outlet, which is only about 6in. square, is at the south-west angle; there was about a foot of deposit at bottom.

At 58ft. we got among dry shingle, and at 62ft. 6in. came to the course,

on one stone of which red painted characters were found: the face of the stone was not dressed, but, in the working of it, a large piece had split off, leaving a smooth face, and on this the characters were painted. In one case the letter appeared to have been put on before the stone was laid, as the trickling from the paint was on the upper side.

Rock was found at 70ft. 9in. below bottom of gallery: it had a steep slope of two in one to south.

This shaft was now tamped up and the gallery driven on to south along the side of the Haram Wall for 75ft. past the corner of the tower, the soil being very good; all at once our old enemy, the shingle, again appeared and filled up the end of our gallery, so that it had to be tamped up for 12ft., as it is impossible to drive through this shingle with our means. Shaft now sunk (commenced 2nd December, 1869) at 63ft. south of corner of tower, passed this loose earth and large stones, some of them 4ft. long and very nicely dressed. 13th December got down to a depth of 28ft.

Wherever the wall of the Haram, south of the corner of the tower, has been seen as yet, the stones have been found with projecting faces, and it seems most probable that this description of wall extends in an unbroken line as far as the Golden Gate.

The Count de Vogüé visited the excavations at H. 10, and was shown the aqueduct; while he was down there a piece of magnesium wire was lighted at the top of the *light-shaft* so as to imitate daylight pouring in; the light after passing down the shaft strikes the aqueduct just where the passage opens in, so that any person coming down it would have been able to have seen where he was going to.

The passage has since been cleared out for 28ft.; it was filled with earth and large stones which rolled down with great force into the aqueduct; the passage is found to be a staircase leading up towards surface to north, at an angle of one in one; it appears to have been cut out of the solid after the wall was built. The roof is hollowed a little in centre and ascends by great steps of about 4ft. each.

13*th December*, 1869.

The Substruction at the South-East Angle.—I gave you an account of a visit to this on 11th Feb., 1869. A few days ago I went down again in company with Count de Vogüé to ascertain for certain whether the engaged columns, shown blue in my plan of same date, 1869, rest upon bases or not.

The result is important, neither the engaged column C or A have bases; C rests immediately upon the rock, which then forms the ramp leading up from the Triple Gate. A is let into the rock about 6 or 8in., the rock then being about 2ft. 6in. below the present surface.

Jerusalem, 13*th December*, 1869.

Himyaritic Stone from Arabia.—A Jew professes to have brought this stone from a place he calls Sheba, on the other side of Jeddah.

He said he had obtained it from a ruined rectangular building, and that it was let into the wall about 4ft. from the ground—the building he appeared to think had been a place of worship.

Dr. Chaplin was allowed to take a squeeze, and he kindly places it at the disposal of the Palestine Exploration Fund ; a pencil trace from the squeeze was forwarded last mail.

The stone appears to be alabaster; the sculpture in bas-relief, very rudely done, appears to have reference to the ancient worship of nature. The stone is split in two.

The Jew says he was offered four hundred rupees for it by a gentleman at Aden; he has been offered five pounds for it and has refused it.

18*th December*, 1869.

The Great Rock-cut Aqueduct in the Kedron Valley.—A description of this was given at the public meeting held at Willis's Rooms, June 11, 1868: an extract from it is given below:—

"*Rock-cut Aqueduct.*—Down the valley of the Kedron, and south of Siloam, there is the Well of Job, or Joab, about which there are many curious traditions which connect it in many ways with the ancient Temple. It has been examined, but to my mind there is yet a mystery concealed there. It is a well 100ft. deep, without appearance of connection with any surface drains, and yet after heavy rains it fills up and overflows in a voluminous stream.

"South of this well, about five hundred yards, there is a place called by the Arabs, 'The Well of the Steps,' about which they had a tradition that there were steps leading up to the Well of Joab. I had the ground opened, and at 12ft. below the surface came upon a large stone which suddenly rolled away, revealing a staircase cut in the solid rock leading to a rock-cut chamber and aqueduct, running north and south. It was filled up with silt or fine clay. We cleared it out to the north for about 100ft., and found it to be a great aqueduct 6ft. high and from 3ft. 6in. to 4ft. broad. When the winter rains came on, a stream burst through the silt, and, completely filling the passage, found its way up the steps and rolled down the valley in an abundant stream, joining that from the Well of Joab. In April the stream abated, and in May we were able to commence again; and, working day and night, we may expect to reach the city in six months. We are working with English barrows in this aqueduct, much to the delight of the Arab workmen, who take a childish pleasure in using these new toys. We clean out at present about 15 cubic yards in 24 hours. Looking at this aqueduct from a sanitary point of view, we might suppose it built for carrying off the sewage

of the city, and, from a military point of view, for carrying secretly off any superabundant water to the nearest crevice in the rocks; possibly it may have been used for both purposes. Looking into the Bible history, we find in the Second Book of Chronicles that Hezekiah stopped the brook that ran through the midst of the land, saying, 'Why should the King of Assyria come and find much water?' Again, we find from the other account that the refuse from the burnt-offerings was carried down to the Kedron by a subterranean channel; and, as water would be wanted to run it down, it may be supposed that the aqueduct in question might have been used for some such purpose. At any rate, it is highly important that we should discover for what purpose; and we have the chance of its being a clue to the Altar of the Temple, and—which is of more practical value to the inhabitants of Jerusalem—to the hidden springs of Hezekiah, which, if found, might again supply the city with living water."

A further account is given in Letter XXV., 1st January, 1869. Since that time the work has not been resumed until within the last few days, when I recommenced in order to obtain a correct idea of the probable expenditure that would be incurred in continuing the work.

It took a few days to get quit of the mud which lay in the passage; for, all through the summer there has been a little water trickling into the tunnel: on going on to north we had not cleared away 3ft. before a large grotto was discovered, out of which the aqueduct opened.

Apparently this grotto was originally natural, but afterwards cut out so as to form a receiving tank. It is 35ft. from east to west, and 20ft. from north to south, nearly oval on plan; it is about 45ft. in height, the roof being formed by the sides gradually approaching each other. At the highest point there appears to be a shaft upwards, about 2ft. square, covered by a white stone. The bottom of the passage by which we entered is about 9 (or more) ft. above the bottom of the cistern, so that there would always be a depth of 9ft. of water retained in it. At the northern end are two aqueducts running into the cistern: the upper and eastern one has its bottom 12ft. above the bottom of the outlet aqueduct; below it (the upper), by 9ft. and 6ft. to the west, is the lower aqueduct which, after a few feet, runs in under the upper one; they both come from the same point (about 80ft. north-north-east of the cistern), where they are in one, forming a passage 15ft. high, and nearly 6ft. wide. This point is 90ft. due west of Eyub.

The way in which these two aqueducts run together is very curious: at the point where it is one passage, there is a little staircase cut in the rock going up about 9ft. on to a landing where the upper aqueduct begins; this is 3ft. 10in. wide, and 5ft. 9in. high, it is very well cut, the roof is curved a little, and it runs nearly straight to the cistern, falling about 2 (?) ft. in its length; about midway it is blocked up by a masonry wall, 3ft. thick, and composed of cut stones set in a hard black mortar, apparently mixed with oil. The lower aqueduct starts from the same level as the bottom of the high passage. It is only about 3½ft.

high (apparent), and the top is about 6ft. below the bottom of upper aqueduct; for some distance it runs immediately under the upper one, and then, with some winding, comes out to its west by 6ft.: just before it enters the cistern, it opens into a natural cleft in the rock, which appears to be part of the original cavern. This cleft is nearly perpendicular, and is about 4ft. wide, and over 15ft. high. Corporal M'Kenzie went up it 48ft. to north-west, it then gets too narrow to be followed up.

The rock throughout is a hard mezzeh, and the passages appear to have been cut out with the chisel. The surface of the rock appears to be not less than 70ft. above the aqueduct.

This tunnel, as we have now examined it, extends from near Bir Eyub, to a point 1800ft. down the Kedron Valley: it has been judiciously cut under one side (the west side) of the valley, so that though it is from 70 to 90ft. under the surface of the rock, yet the staircases being commenced to the east (nearer the bottom of the valley), have not to descend by more than 40 to 50ft.: in the 1,800ft. we have cleared out, 7 staircases have been exposed: they are about 3ft. wide, and descend at about an angle of 35°. The steps are about 1ft. in height, and the tread is about 15in,: in some cases the steps are much worn and broken. At the bottom of some of the staircases, the aqueduct is deepened a little so as to form a shallow pool.

In one place, between the third and fourth staircase, there is a branch tunnel leading across towards the east side of the valley in a south-east direction: this was only followed for 30ft.

It is apparent that this aqueduct was of considerable importance, for the labour in cutting it so far below the surface must have been enormous. That it was for water I think there can be no doubt, and probably for pure water.

The cistern we have just found is similar in its construction to those found under Robinson's Arch, and the aqueduct altogether has the same appearance as the rock-cut aqueduct found there; the staircases, too, may have originally been used for bringing up the chippings, but they appeared to be very much worn, as if they had been in constant use.

We have not as yet found there is any connection with Bir Eyub, and if we do find any, it will probably be a communication by which the water from the aqueduct flows into it, and cut at a later period; neither is there any appearance of its being connected with the Virgin's Fount Aqueduct, for they differ in height and width, the tunnel we have found being nearly twice as wide and very much higher; also the Virgin's Fount Aqueduct winds very much more than this one, and there are shafts instead of staircases.

It would be a most important point to establish the direction from whence this great aqueduct comes; at present we do not know whether it comes down the Kedron Valley, the Tyropeon, or by the valley from the Jaffa Gate.

It is currently reported in the city that a Jewish blacksmith descended

Bir Eyub a few years ago, when it was dry, and found a passage at bottom from whence a strong wind was blowing. However this may be, it is evident that the man has some curious tradition about the place, as he has been trying to buy the land over where we have lately found the grotto, and the fellahîn of Siloam say they refused twelve napoleons for it. This man sent a messenger a short time ago to ask if we were going on with the clearing out of the great aqueduct, and to say that if so he intended to raise the money to continue our work.

21*st December*, 1869.

In continuing our work a staircase at angle of about 45°, and 90ft. up it, has been found. The top is walled up with masonry: near the top another staircase leads off towards Bir Eyub, branching into two. The rains have suddenly set in, and if Bir Eyub overflows, this work will have to be stopped for the present.

N.B. It has been stated that the bottom of the cistern or grotto is 9ft. below bottom of outflow aqueduct, but 9ft. is the depth to which we have sunk. The water in the cistern prevents our sinking deeper, and the jumper cannot be driven on account of the large stones met with.

21*st December*, 1869.

Weights.—A stone weight, which was found during the past few months at Robinson's Arch, has characters on it supposed to be Hebrew.

Mr. Ganneau thinks that on one side they refer to the weight, viz., five shekels.

The exact weight is 1,234½ grains troy, which would give 247 grains to the shekel. I send a squeeze of the stone and also a sketch of the characters. It would be interesting to get these deciphered.*

You have now a great number of stone-weights from the excavations, and I have to suggest that they should be accurately weighed, their original weights estimated, and some notes made upon them.

The stone in question is of the kind classed A in the list sent home in January.

21*st December*, 1869.

The Gennath Gate (*so-called*).—An account of this is given in Letter XXXVII., 1st February, 1869.

The jambs of the gate do not rest on the rock, but on made earth mixed with pottery similar to what we found at lowest point south-east angle of Haram Area. The rock we found at a level of 2,449ft., the old

* Nabathean Inscription.—This squeeze was brought me by an Adwan. He says he took it from a stone at Um-el Russas, to the east of the Dead Sea.

roadway going under the gate being 2,474½ft., and the surface of ground at mouth of shaft 2,486ft.

No walls of any kind were found near the rock, and no signs of any wall older than the Gennath Gate within 13ft. to the east and 20ft. to the south; if the first wall of the city was built up from the rock and was not totally destroyed, it was not within the above-mentioned distance of this gate.

20th December, 1869.

B 6. Commenced this shaft 19th May, 1869, at the side of the street El Wad, close to the "Bath of the Sultan" (see Ordnance Survey Plan $\frac{1}{2500}$, 27): level at surface 2,418ft.

Passed through black soil mixed with large rough stones: came on rock at 17½ft.: it shelves down rapidly to west-south-west at about 45° by steps 2ft. 6in. high. Drove a gallery in to west for the purpose of discovering the lowest parts of the valley: found the soil very hard and mixed with large stones. At 5ft. 6in. broke into a passage or old sewer running north and south, apparently down the street El Wad, which runs from the Damascus Gate to the Mahkama. This passage is of rough stones: it is 4ft. 9in. high and 2ft. wide, and has a slope to south of about one in six; the bottom is the natural rock; the roof is formed of stones, about 14in. in breadth, laid across from wall to wall.

Continued gallery to west; rock still falling. At 17ft. broke into a masonry shaft (plastered), about 4ft. square, leading down towards the rock. On climbing up this shaft 7ft. drain was found opening into it from north to south; cleared the shaft out and descended: found the rock scarped to south and east of shaft, and found rock bottom at 15ft. below our gallery: the rock bottom is cut level: level of rock 2,378ft.

It is probable that this place was an old cistern, the scarps facing to the north and west being the sides. The soil passed through here was wet mud mixed with stones. Shaft now tamped up; and the first passage found was examined to south.

This passage runs down under the street El Wad. At first the soil was like silt or clay; but, after 50ft. or 60ft., it became like sand left by a running stream: it was quite filled up. After continuing the passage for 130ft. to south under the street El Wad, it was tamped up.

Three shafts leading down into this passage were passed; the first at 16ft. south of one shaft: it is circular, 2ft. in diameter, and is closed by a flat stone at 8ft. 3in. from top of passage: the second at 62ft. from entrance, is 1ft. 8in. square, and covered by flat stone at 5ft. 3in. from roof of passage: the third at 76ft., and connected a drain from the east with the main drain. It does not seem certain whether this passage had originally been for water or for a sewer. It does not appear to have been used for many years.

Although we did not find the natural course of this valley, yet I am

inclined to think that the passage we first found runs nearly along it, and the street El Wad defines it. The scarped rock we found may have been for other purposes, but I think it probably is inside of a cistern cut in the rock. It was a peculiar arrangement to have had a sewer running in from both north and south if this had not been a tank. The gallery to west was not continued on account of our having reached nearly to the west side of the street.

South-east Angle Haram Area.—The frames had become quite rotten in the galleries at this shaft. Many of them had to be left in; and, in tamping up the upper gallery, so many had given way, that it was necessary to fix a smaller set of frames inside the larger ones before the tamping up could be effected with safety. These galleries have already been described.

In tamping them up, a gallery was driven down to east, along the surface of the rock, so as to complete the section of the rock down to the Kedron Valley.

The rock is found to be nearly level in front of the east wall for 10ft.: it then rapidly slopes down the 24ft. in 30ft. As the section of rock thus found is nearly at the same angle, and in the line of the section coming up from the Kedron, it was not considered necessary to continue this gallery.

Jerusalem, 13th Dec., 1869.

Roofs of Houses at Jerusalem.—In the rock-cut aqueduct under Robinson's Arch, a stone roller was found, the object of which was not at first apparent.

On seeing the rollers for the flat roofs in the Lebanon, Corporal McKenzie suggested that our roller had been used for the same purpose, and on examination I found it to be similar in its shape and proportions, and have little doubt that it was formerly used in Jerusalem for rolling the flat roof of a house.

The houses of Jerusalem now, as is well known, have vaulted or ground roofs of masonry, and it would be a matter of considerable interest to ascertain when they first came into use.

In the Old Testament we find the roofs to have been generally flat, both in Jerusalem and elsewhere. Deut. xxii. 8; Josh ii. 6; Judg. xvi. 27; 1 Sam. ix. 25; 2 Sam. xi. 2; xvi. 22; xviii. 24; Jer. xix. 13; Zeph. i. 5.

In the New Testament the roofs are often spoken of as being flat, although we do not hear much about those at Jerusalem.

It is, however, to be observed that many of the vaulted roofs of the present day at Jerusalem are nearly flat, so that the mere fact of a roof having been flat, and used for walking on, is no proof that it was not vaulted and of masonry; but it is difficult to conceive why people

should go to the expense of building dismal dungeons with vaulted roofs, so long as there was still timber in the land: rather we should suppose that the present masonry roofs came in from necessity, when there was no wood obtainable. At what period that happened it is difficult to say; we know after the destruction of Jerusalem by Titus that the woods immediately surrounding the city had ceased to exist, but there might still have been plenty of timber at a greater distance, and that there were at one time great forests in Palestine cannot be doubted, for at the present day we obtain our fire-wood in this city from the roots of trees long since disappeared, dug up by the fellahîn in the neighbourhood.

The stone roller we have found shows that at least one house in Jerusalem was roofed in the same style as houses at the present day are in the Lebanon and in those parts of Palestine where wood is obtainable, and this is more particularly interesting as the roof of Herod's Temple is said by Dr. Lightfoot (on the strength of the Talmud) to have been nearly flat and to have been composed of plaster formed of reeds, chalk, stones, &c., made so compact as to be like stone; if this be so, either the art of making concrete roofs permanently water tight has been lost to this country, or else the roof of the temple must have been rolled, or pointed and repaired periodically, and so the sharp points with which Josephus adorns the roof, for the purpose of pricking the feet of the passing birds, would have necessarily been of a movable nature, possibly like "crows' feet" (iron spikes used in warfare for throwing into fords, &c., in order to retard the approach of an enemy).

Another point of interest relating to vaulted roofs is the amount of *débris* that would result from their destruction.

The house I am at present sitting in (of two storeys) if destroyed and the ruins smoothed over the site would give a general height of *débris* of 14ft., while if it had been a house with a wooden roof covered with concrete, the height of *débris* would not have been more than 6ft.

In repeated destructions this difference would be very great. There is, however, one advantage that these vaulted houses have; they cannot be burned down, and would have to be regularly battered down before they could be destroyed, so that cities like Jerusalem might last through a siege of former days with little damage, while one like Beyrout would be burnt down, and this might possibly have been a reason in unsettled times for building the houses entirely of stone. Against this one advantage of the vaulted roofs stand a host of disadvantages, aggravated by the vile method of construction practised by the native architects of this city.

Instead of adopting the Spanish *patio* (which is a courtyard inside a house, and can be made of such a size as to be covered with a cloth in summer and with glass in winter, and so keep the house at even temperature), they construct a series of isolated rooms round a large courtyard, with narrow and steep stairs leading to the exposed gallery open-

ing into the rooms on the upper floor; the result is that in going from one room to another an umbrella is generally useful against the sun in summer, the rain and snow in winter, or a great-coat is wanted to keep off the wind. The vaults are damp, and require a fire—light a stove in one room and it becomes in a few minutes like an oven, while the others by the contrast are rendered to the senses still more damp and disagreeable.

The vaults appear to be permanently damp, and many of them acquire a nasty unhealthy smell after they have been shut up a short time; perhaps this may result from a common habit of ascertaining the faulty parts of the roof by letting the first rains fall on it, and then looking to see where it shows the damp inside.

December 22, 1869.

K. 1. Commenced 3rd July, 1869. A trench was dug in front of the core of an old wall appearing above the surface of ground just outside the city wall, north of Kalât al Jalud. Rock was found at 4ft., and between it and the core of the wall is a space of about 2ft., probably where the cut stone rested. The rock was examined for a distance of 20ft., but no appearance of any old foundations.

K. 2 commenced same day, in Greek garden outside city wall to north-west, a little north of Latin Patriarch's Palace, where a core of a wall crops up on surface; rock was found at 4ft., the core resting on it with a space in front where the cut stone had been; rock scarped in front; followed it down and found it bevelled at bottom at 12ft. below surface; no signs of any old foundations.

At the Sisters of Zion, in excavating to the east a prolongation of the scarped rock to the north-east has been found for about 30ft.

M. Gauman has discovered two Roman inscriptions in the city, one on the wall south side of church of the Holy Sepulchre, the other on the north city wall near the Bab es Zahire; we have assisted him in getting squeezes and casts of them, and he will probably publish them when they are ready.

I send you thirty-one traces of inscriptions found near Saida, which M. Draghello, the French vice-consul, asked me to copy and forward to the Society.

Certainty of a Valley running from near Jaffa Gate to Bab es Silsile.—During the past year many tanks have been examined in the city, and the level of surface of rock ascertained from them, so that we have now an approximate contour plan showing the surface of rock in the city.

In this work much time has been unavoidably expended, for at each tank there are petty difficulties, and in many cases even the silver key fails to unlock them if it is not used carefully.

When they are seen the greater part of them either lie on the rock or are else so plastered that the rock cannot be seen.

One result, however, is the certainty of a valley running down from the Jaffa Gate to the Bab es Silsile, apparently just as is shown on the Ordnance Survey plan, $\frac{1}{1000}$.

Shaft at Golden Gate.—The galleries in this shaft have now been tamped up; the tank referred to in Letter XL. was examined; it is 5ft. 4in. long and 2ft. 2in. broad, plastered on inside, and has a flat stone for roof. It is about 5ft. high; apparently it was for holding water; a cylindrical tile was lying near it. Within a few feet of this we found the ring cut in the scarped rock, apparently for tying up cattle; similar rings are found in the substructions of the Haram Area, and in the cavern described Letter XXXVII., also in the substructions at Baalbec.

The Copper Candlestick found south of the Haram Area in Cavern (Letter XXXVII., 1st Feb., 1869).—I have seen three lamp-holders at the house of a gentleman at Beyrout, which appear to be almost exactly similar to the one we have found; on each of these a copper lamp fits on to the spike at top. Two of them are supposed to be early Christian, and one Greek, or Greco-Phœnician.

22nd November, 1869.

North-east Angle continued.—The gallery has been driven 40ft. to south of southern angle of the north-east tower, and a shaft sunk facing five courses of the wall.

In each course the faces of the stones are found to project from 6in. to 12in., so that it may be said that it is highly probable that the Haram Wall at this end is, from the present surface to the rock (over 110ft.), composed of stones with well-dressed marginal drafts, and with faces projecting considerably; while the tower forming part of the wall is composed of stones with projecting faces up to a certain height, and after that with the well-known type of bevelled stones.

The Valley of Hinnom.—In my remarks on the topography of Jerusalem, June 6, 1869, I suggested that the Valley of the Kedron and that of Hinnom, or "the child of Hinnom," are identical.

In support of this there is the present name to this valley to the east of the Haram Area, which existed at the time of Niz-ed-Deir, viz., Wady Gehinnom. And there is a verse in the book of the prophet Jeremiah xix. 11, "Go forth into the valley of the son of Hinnom, which is by the entry of the East Gate."

I can find nothing in support of its having been on the west side of Jerusalem, or identical with the Wady Rebebi.

TEMPERATURE (FAHRENHEIT) OF SPRINGS ON EAST SIDE OF JORDAN.

Date.	Name.	Temperature.	Remarks.	Height in feet above N.S.L. Mediterranean.
	Ain Suweimeh	80° 0′	Summer of 1867	1080
		82 0	Winter of 1868	
July 19, 1867 ...	South of Kaferein, near Wady Mashâïdeh: hot spring	95 5	nearly stagnant ...	580
July 22, 1867 ...	'Ain Hesbân	68 4		2300
July 22, 1867 ...	'Ain Buwarideh	73 0		1720
July 23, 1867 ...	Ayûn Mûsa ... upper	73 0		1690
	lower	74 0		1590
July 24, 1867 ...	'Ain Nâûr	64 5		2430
July 28, 1867 ...	'Ain Amman	64 0		2550
August 3, 1867 ...	'Ain Seïr	64 7		2230
August 5, 1867 ...	'Ain Safût	68 0		2700
August 5, 1867 ...	'Ain Hemar	63 0		3000
August 5, 1867 ...	Water in Wady az Zarka	73 5		770
August 7, 1867 ...	'Ain Jarash	67 0		1900
August 9, 1867 ...	'Ain Kelteh	67 5		2265
August 10, 1867...	'Ain Alan	67 5		1900
August 13, 1867...	'Ain Jadûr	67 5		2380
August 14, 1867...	'Ain Jaryah	81 0		400
February, 1868 ...	Callirhoea	scalding.		300

ON WEST OF JORDAN AND DEAD SEA.

July 18, 1867.....	'Ain as Sultân	71 5		730
August 14, 1867...	'Ain Hajlâ	75 0		1200
February 29, 1868	'Ain Sakut (Succoth) ...	79 9	two of them ...	
		78 0		
July 7, 1867	'Ain Jidy	82 5		640

It will be observed that to a certain extent the heat of these springs diminishes with the altitude; the temperature of air is not given because it could not have affected the water at the head of the spring, and such is the velocity with which the water issues that the temperature of the ground on *surface* is not likely materially to affect them; these figures probably give an approximate idea of the temperature of the rocks *beneath the surface* at the different altitudes.

THE

PALESTINE EXPLORATION FUND.

PATRON.

HER MAJESTY THE QUEEN.

OFFICE—9, PALL MALL EAST, S.W., LONDON.

Reports on Progress of Works at Jerusalem and elsewhere in the Holy Land, by Lieutenant Warren, R.E.

XLVII.

25th February, 1870.

Conclusion of the Excavations at the N.E. Angle of Haram Area.—Account of this work has been sent up to 13th December, 1869; we had then failed in driving a gallery to south along Haram Wall more than 75ft. beyond the tower, and had commenced a shaft from the gallery along the Haram Wall at 63ft. south of south-east angle of tower, and had sunk to a depth of 28ft.

The level of gallery at shaft mouth was 2,363ft. 3in. (see plan). For the first 17ft. 6in. passed through good black earth to 2,345ft. 6in., then passed through a heap of broken cut stone, the faces well cut with marginal drafts. It was difficult work getting through these, as they had to be broken up with the hammer, and the concussion brought stones down upon the workmen.

At 31ft. (2,332ft.) these large stones terminated, and to 36ft. (2,327ft.) alternate layers of earth and gravel or small stones were met with, each layer of earth about 6in. thick, and gravel about 9in.

We now came on loose shingle and stone clippings to a depth of 49ft. (2,313ft.). The shingle kept giving way, and running into the shaft till it was feared the large broken stones would be dislodged; the frames were battened together and earth thrown behind them. On stone U, at level 2,326ft., a mark was found, it is difficult to say whether it is natural or not; a squeeze of it did not show at all. A sketch has been made.

Passed through a hard black soil, sloping to east, till 56ft. (2,307ft.),

when a layer of red clay, mixed with small stones, three inches thick, was reached. At 53ft. (2,310ft.) a small drain was found running along the Haram Wall on top of stone Z, evidently the same drain as was met with in the shaft at south-east angle of tower: it was made of small stones and mortar; very hard, apparently had been mixed with oil. Just below this drain several pieces of tessera were found: they are similar to those found about Jerusalem, supposed to be Roman. Several specimens have been kept, they have a high polish.

We now continued below the layer of red clay (which dips to east), and finding the soil black and hard to 60ft. 6in. (2,302ft. 9in.), commenced gallery B to south at that level on 22nd December, 1869.

At 9ft. 6in. to south, that is at 72ft. 6in. to south of south-east angle of tower, commenced a shaft through black earth and small stones and broken pieces of pottery. At 65ft. came on small shingle to 67ft. (2,296ft.), and then stones and wet earth to 80ft. (2,283ft.), when rock was found sloping to north, which showed us that we had gone too far to south. The rock is cut away in steps for the stones of the wall.

A gallery was now commenced to north along the rock, to find the bottom of the valley; but, after six feet, a large stone crushed through the frames, and the gallery had to be tamped up. The rock was found to continue falling to north.

Gallery B was now driven to north for 18ft., when at 45ft. from south-east angle of tower a shaft was sunk through hard black soil, for 11ft. 6in. (2,292ft.), when shingle was met with. The rock was found at 2,289 sloping rapidly to south, and stepped down for the reception of the stones of the wall.

Commenced a gallery to south along rock, and at 16ft., 24th January; found the lowest point 85ft. below the gallery, or at a level of 2,278ft. 3in., or a little over 125ft. below the present surface. This is the greatest depth of *débris* we have yet found.

The ground here was very wet, and it was to all appearances the bottom of the valley; but to make sure, the gallery B was again driven to south, until at 104ft. 6in. from south-east angle of tower, shingle, sloping to south 1 in 5, was met with, and the gallery had to be stopped. At this point a shaft was sunk: the first 18in. through black soil, then a layer of blue clay without stone or grit in it, from 9in. to 12in. thick, and falling to east at one in twelve; under this was gravel, hard and difficult to get through, till at 16ft. rock was found (7th February, 1870) at a level of 2,289, sloping to north.

There was thus a rise from the apparent bottom of the valley of 11ft. in 46ft. horizontal.

There is still, however, the possibility of the bottom of the valley being farther to south, as the rock here appears to lie in benches, with every here and there a drop. As it is, the bottom of the valley, as found by us, is over 165ft. below the Sakhra.

In this gallery at H 10 we have excavated more than 600ft. run of shaft and gallery.

Elevation and sections of the point where the wall has been exposed are given, from which it will be seen that the faces of the stones project in most cases upwards of a foot beyond the marginal drafts, and this is to be noted particularly in comparing this wall with that lately exposed on east side near south-east angle.

On the stone *a* (below Z) was a surface of plaster.

January 20th, 1870.

A sarcophagus* was presented to the Palestine Exploration Fund on January 19th, 1870, by Mr. Hay, acting consul for the United States, and Captain Walker: they found it near the Convent of the Cross, in a rock-cut tomb.

This tomb is situated on the east side of the valley running up from the convent to the third tower on the Jaffa road; it is cut out of a soft rock like the Malaki.

The entrance is 1ft. 9in. wide, and opens into a chamber 8ft. 4in. square, and 3ft. 10in. high; on the south side are three loculi 7ft. 6in. long, 1ft. 4in. wide, and 2ft. 10in. high; on the east side are two loculi (see plan) of about the same dimensions. The roof is flat; the sarcophagus is only 2ft. 6·9in. long, 1ft. 0·4in. broad, and 1ft. 3·5in. high, and appears to be less ancient than the tomb.

Nothing else was found inside but a lamp of earthenware.

The ground belongs to the Lifta men, and the tomb appears to have been opened for some years; but the sarcophagus was not removed, as they thought it to be Moslem. It was amusing to find that the fellâh Sergeant Birtles took with him to remove it was the owner of it and the soil, and had often wished to make a little money out of his property. The sarcophagus is of soft stone, similar in general appearance to those found in great numbers about Jerusalem, but more skilfully cut than any I have seen. A squeeze has been taken of it.

It is noticeable that these sarcophagi are seldom found close to Jerusalem, but generally at a distance of about a mile. We have found them on the east side of Olivet, north of Russian Building, near Mar Elias, and now at the Convent of the Cross. They have generally been ascribed to the third or fourth century of our era. M. de Saulcy found one very similar to east of Dead Sea, at Kerak, I think.

The great Rock-cut Aqueduct south of Bir Eyub.—Account of this was given up to 21st December, 1869, when some rock-cut staircases were found 86ft. north of the cistern or grotto.

A shaft was now sunk at 75ft. north of the pool at Bir Eyub, and at a depth of 22ft. came on head of staircase. The soil sunk through was black earth and stones, mixed with a great quantity of red potsherds. The staircase was found to be closed at top by a masonry

* This sarcophagus has been received, and is now in the office of the Fund.

wall, and on breaking through this, the steps, after going 6ft. to west, branch off north and south. That to the north has again a branch staircase to east.

The northern staircase has sixty-seven steps. It descends 39ft. vertical, in 56ft. horizontal, and ends abruptly, having never been finished. At 16ft. 9in. down this staircase the branch to east commences, and falls (with twenty-two steps) 19ft. vertical in 27ft. horizontal; it then turns to north, and falls 5ft. 10in. in 10ft. 6in., and ends abruptly.

The staircase to south (with fifty-four steps) falls 41ft. 5in. in 72ft., and ends in the aqueduct, where the upper and lower join together, at about 86ft. north of the grotto. These staircases were only partially filled up with mud and broken jars and pottery.

There only now remained the continuation of lower aqueduct to north to examine. This was continued for 148ft., where it was also found to end abruptly, rock on all sides. It is generally about 3ft. 7in. wide and 6ft. high. It appears, then, that this great work has never been completed. It is to be presumed that the great volume of water which now issues from the aqueduct in the spring, enters through the rifts in the rocky sides of the grotto. The reasons for the wall stopping up the upper aqueduct having been built are not apparent. This aqueduct, leading into the grotto, is 86ft. long: that is 44ft. from grotto to first wall, 4ft. thickness of wall, 32ft. to second wall, 3ft. thickness of wall, and 3ft. to small steps.

In the first wall at bottom a hole or duct was left $6\frac{3}{4}$in. by 4in., and on the northern side a stone plug to fit and 12in. long was found in it.

THE

PALESTINE EXPLORATION FUND.

FROM THE ORIGINAL PROSPECTUS.

No country should be of so much interest to us as that in which the documents of our Faith were written, and the momentous events they describe enacted. At the same time no country more urgently requires illustration. Even to a casual traveller in the Holy Land the Bible becomes, in its form, and therefore to some extent in its substance, a new book. Many an allusion which hitherto had no meaning, or had lain unnoticed, starts into prominence and throws a light over a whole passage.

It is proposed to raise a fund to be applied to the purposes of investigating the Holy Land, by employing competent persons to examine the following points :—

1. *Archæology.*—Jerusalem alone would furnish an ample field in this department. What is above ground will be accurately known when the present survey is completed ; but below the surface hardly anything has yet been discovered. The Tombs of the Kings on Mount Zion—the course of the Tyropœon Valley—the real extent of the Temple enclosure—the site of the Tower of Antonia—of the Palace of Herod—of Ophel—of the Pool of Bethesda—the position of the towers of Hippicus and Psephinus—the spring and conduit of Hezekiah—are all awaiting excavation.

2. *Manners and Customs.*—A work is urgently required which shall do for the Holy Land what Mr. Lane's "Modern Egyptians" has done for Egypt—describe in a systematic and exhaustive order, with clear and exact minuteness, the manners, habits, rites, and language of the present inhabitants, with engravings intended like his "not to embellish the pages, but to explain the text." Many of the ancient and peculiar customs of Palestine are fast vanishing before the increasing tide of Western manners, and in a short time the exact meaning of many things which find their correspondences in the Bible will have perished.

3. *Topography.*—Of the coast-line of Palestine we now possess an accurate map in the recent Admiralty Charts. What is wanted is a survey which

when we advance inland should give the position of the principal points throughout the country with equal accuracy. If these were fixed, the intermediate spots and the smaller places could be filled in with comparative ease and certainty.

4. *Geology.*—Of this we are in ignorance of almost every detail. The valley of the Jordan and basin of the Dead Sea is geologically one of the most remarkable on the earth's surface. To use the words of Sir Roderick Murchison, "it is the key to the whole of the geology of the district." Its Biblical interest is equally great. To name but one point. The decision of the question whether any volcanic changes have occurred round the margin of the lake within the historical period, may throw a new aspect over the whole narrative of the destruction of Sodom and Gomorrah.

5. *Natural Sciences—Botany, Zoology, Meteorology.*—These are at present but very imperfectly known, while the recent investigations of Mr. Tristram, limited as they necessarily were, show that researches are likely to furnish results of no common scientific interest.

It will perhaps be said that many of the points above enumerated have been already examined—that Robinson, Stanley, Rosen, and others have done much in the department of topography—that Hooker, and more recently Tristram, have reported on the botany—that Roth and Tristram have brought home shells, fish, birds, and eggs—that the researches of M. Lartet on the geology of the Dead Sea, and those of the Duc de Luynes, De Vogue, and De Saulcy on archæology, are on the eve of publication. This is true; but without intending to detract from the usefulness or the credit of the labours of these eminent men, it is sufficient to observe that their researches have been partial and isolated, and their results in too many cases discrepant with each other. What is now proposed is an expedition composed of thoroughly competent persons in each branch of research, with perfect command of funds and time, and with all possible appliances and facilities, who should produce a report on Palestine which might be accepted by all parties as a trustworthy and thoroughly satisfactory document.

Her Majesty the Queen has been graciously pleased to become the Patron of the Association, and to contribute to its funds.

Subscriptions are received by the Bankers of the Association, Messrs. Coutts and Co., Strand; and the Union Bank of London, 4, Pall Mall East, and by the Honorary Secretary.

By order of the Committee,

GEORGE GROVE, *Hon. Secretary.*

THE TOPOGRAPHY OF JERUSALEM.

A SHORT sketch of the topography of Jerusalem may aid those who are not familiar with the subject in understanding the accompanying Report. Jerusalem is a mountain city. It was pre-eminently so to the Jew; for, with the exception of Samaria and Hebron, the other great cities within his ken, those of Egypt and Mesopotamia, Damascus, Tyre, Gaza, Jezreel, Jericho, were emphatically cities of the plain The Temple pavement stood some 2,400ft. above the Mediterranean, distant 25 miles as the crow flies; some 3,700ft. above the Dead Sea, distant 12 miles. The Bible, indeed, teems with allusions to this local peculiarity of its site as a mountain city. The plateau on which the city stands is of tertiary limestone; the strata are usually nearly horizontal, and the landscape shows generally a succession of plateaux and flat-topped hills, broken here and there by deep narrow gullies, and generally a marked resemblance can be traced to the characteristic scenery of parts of the limestone districts of our own country.

At the point where the city stands a tongue of land is enclosed between two of these ravines, and on this the modern, like the ancient city, is built. The easternmost of these ravines, the valley of Jehoshaphat or of the Kedron, has a course nearly north and south; the westernmost, the valley of Hinnom, after running a short distance to the southward, makes a bold sweep to the east, and forming the southern limit to the tongue of land above-mentioned, joins the valley of the Kedron, not far from the Beer Eyub, or Well of Joab. Both ravines commence as a mere depression of the ground, but their floor sinks rapidly, and their sides, encumbered as they are now with the accumulated *débris* of centuries, and the ruins of buildings thrown down by successive invaders or domestic factions, are still steep and difficult of access. In ancient times the bare rock must have shown itself in many places, and in more than one place the researches of Mr. Warren have shown that the natural difficulties of the ground were artificially increased in ancient times by the scarping of the rock surface. Hence, we find Jerusalem to have been at all times, before the invention of gunpowder, looked upon as a fortress of great strength; on three sides, the east, the south, and the west, the encircling ravines formed an impregnable obstacle to an assailant; the attack could only be directed against the northern face of the city, where, as we are informed by Josephus, the absence of natural defences was at the time of the famous siege by Titus supplied by three distinct lines of wall. To determine the actual course of these walls is, notwithstanding the

detailed description of them in Josephus, one of the most difficult problems before us.

Besides these two principal ravines a third ravine of less importance splits the tongue of land into two unequal portions. This is the Tyropœon valley, the valley of the cheesemakers, or as some would have it, of the Tyrian merchants. A marked depression of the ground runs from north to south through the midst of the modern city from the Damascus gate to a point in the Kedron valley somewhat north of its junction with the valley of Hinnom, forming in its course the boundary between the Mahometan, and the Christian and Jewish quarters of the modern city. At one part of its course it forms the western boundary of the Haram es-Shereef. This depression has generally been identified in its whole course with the Tyropœon valley of Josephus, though Dr. Robinson and others would place this latter along the line of a depression of the ground running between the western or Jaffa gate and the Haram es-Shereef. All, however, are agreed in identifying the lower portion which runs under the west wall of the Haram, and thence to the Kedron, with the Tyropœon; and Mr. Warren's researches have shown that in ancient times this valley was much deeper than at present, and that its ancient course was to the eastward of its present course. It is filled up with *débris* 30ft., 50ft., and even 85ft. in depth.

The city being thus split in the midst into two ridges by this valley, it may be observed, by a reference to the Ordnance Map of Jerusalem, that the western ridge is the most elevated and most important. Most authorities are agreed in placing on some portion of this ridge the original city of Jebus, captured by King David, and the Upper City of Josephus. All again are agreed in fixing Ophel on the end of the tongue of land on which stands the Haram es-Shereef, and in making the site of the Temples of Solomon, Zerubbabel, and Herod, and of the castle of Antonia, either coincide with or occupy some portion of the Haram itself.

But here all agreement may be said to stop. There are differences of opinion whether we should fix the Mount Zion of the Bible and the Mount Zion of the writers of Christian times on the same or on opposite hills, whether the name is to be identified with the eastern or the western ridge. The exact position of the Temple is matter of controversy; the site of the Acra of Josephus, and the Acra of the Book of Maccabees, of Bezetha, the fourth quarter and last added suburb of the city; the position of the Towers Hippicus, Phasaelus, and Mariamne, and of the Tower Psephinus, which if determined would go far to settle the disputed question of the course of the second and third walls of Josephus; the exact extent of the city in the

time of our Saviour; are matters of keen dispute, which can only be settled by patient and systematic burrowing into the *débris* produced by many successive demolitions of the city at those points where the absence of inhabited houses renders it possible to excavate at all. And upon the decision eventually arrived at on these points depends the settlement of what is the most difficult, as it must be by far the most interesting, problem to us all—viz., whether the present Church of the Holy Sepulchre does or does not cover the true sepulchre of our Saviour; if not, whether the true site can yet be recovered; and if so, in what quarter we should look for it. The manner in which the settlement of the points in dispute affects this last question, and the various opinions which have been advanced as to them, is too large a question to be entered upon now. Our subscribers will find most of the opinions held noticed in Dr. Robinson's "Biblical Researches," the Rev. G. Williams's "Holy City," and Mr. Fergusson's paper on the "Topography of Jerusalem," in Smith's "Dictionary of the Bible."

Suffice it to say, that Mr. Williams and his followers regard the present site of the Holy Sepulchre as genuine; Mr. Fergusson considers the octagonal-domed building in the middle of the Haram, known as the Kubbet es-Sacra, to be the Church of the Anastasis, built by Constantine, over what he believed to be the site of the Sepulchre; while Dr. Robinson, agreeing with Mr. Fergusson in discrediting the present traditionary site, is not prepared to point out a substitute. Again, the Temple of Herod is identified by Monsieur de Vogüé with the whole of the present Haram enclosure, the castle of Antonia being placed to the north, where the modern Turkish barracks stand; Mr. Williams places the Temple around the Kubbet es-Sacra, which he considers to be the site of the high altar, regarding the southern portion of the enclosure as of later date. Mr. Fergusson places the Temple on a square of 600ft., of which the southern and western sides respectively would be formed by a length of wall extending for 600ft. east and north of the present south-west angle of the Haram, and Antonia immediately to the north of it. Amidst all these conflicting theories on these and other points systematic inquiry into facts by competent and independent parties is urgently needed, and such are the agents and such the work of the Palestine Exploration Fund.

QUARTERLY STATEMENT OF PROGRESS.

In publishing a continuation of the history of Lieutenant Warren's Work in Jerusalem, the Committee beg to announce to the subscribers and friends of the Fund that they purpose issuing these letters and printing other papers relating to their work no longer at irregular intervals, but in the form of a quarterly pamphlet, which will be forwarded to every subscriber, and which, it is hoped, will be circulated as widely as possible. It is proposed also to make this quarterly pamphlet the medium of publishing new facts or brief papers of interest on the Holy Land. In the present number, for instance, will be found, among other papers, Mr. MacGregor's admirable letter to the *Times*, descriptive of his visit to the shafts; and the Committee invite recent travellers in Palestine to forward to them any notes of interest which may be considered as adding to the stock of information on the Holy Land—its manners and customs, climate, geology, archæology, and any other points.

The letters appended continue the detailed account of Lieutenant Warren's work for the three months ending March 31, 1869, so far as accounts have been received, and contain very much that is of the highest interest.

The work has been carried on at Birket Israil; the S.E. angle of the Haram Wall; Robinson's Arch; the Pool of Siloam; the Wall and Hill of Ophel; the Vaults of Wilson's Arch; the Gate Gennath; the Haram Area itself; the Triple Gate, and the Golden Gate; also at Khureitûn. Full details of results will be found in Lieutenant Warren's own words.

To sum up, however, these results.

The work of the three months establishes the following facts:—

The bottom of the "Birket Israil," the so-called Pool of Bethesda, is found to be a "hard, smooth surface, evidently for the bottom of a reservoir." It is composed of a thickness of 2½in. of plaster, and then a concrete 1ft. 4½in. thick of small stones and mortar. The northern end of the pool, unlike the other sides, is built up of steps of concrete, similar to those at the pools of Solomon. Rock has been found at depths which seem to Lieutenant Warren to show that the Birket Israil never extended farther to the west than

its present limit, at its present depth; that if the pool was ever of greater extent than it is at present, it could only have been by a portion running north towards the west end of the Church of St. Anne; and that the pool has only rock on its western side.

Robinson's Arch, from which so much has already been obtained, has yielded fresh results. The chambers mentioned at p. 89, and the aqueduct running north and south, with circular pools, one of which is *under* the Haram Wall, await further exploration.

The "Wall of Ophel" has been traced to a point where it ends abruptly (see page 90). On the "Hill of Ophel," south of the Haram Area, remarkable results have been obtained (pp. 93 to 96). A cavern cut out of the rock has been found—cisterns, drains, and massive walls are met with, with remains of buildings, the rock, when met with, being frequently scarped and cut away. The wall is from 20 to 40 feet below the surface, and the expense of keeping the shafts open would be too great, owing to the costliness of the wooden frames; they are therefore tamped up.

The account of the very curious tank found at the N.W. corner of the Haram Area (p. 96) has been already published in the *Times* and other papers. The sketch sent home by Lieutenant Warren has been lithographed (see plan 35, appended).

It will be remembered that the secret passage under the great causeway of Tarik Bab es Silsile, to the west of Wilson's Arch, was explored to a distance of 250 feet, when it runs immediately under the street; at 220 feet the passage is terminated abruptly by a comparatively narrow wall, and an opening to the south leads into an ancient vault, and farther on to a place used as a donkey stable. This is about 8 or 9 feet (from the springing of the arch) below the level of the street. Lieutenant Warren has discovered, at a depth of 40 ft. below the street, and under the secret passage, two chambers, with a peculiar gateway (see pages 91, 92). Research in the Tyropœon Valley seems always to bear good fruit, and it is greatly to be lamented that the funds at the disposal of the Committee will not allow the works to be carried on here on a more extensive scale.

At the foot of the wall of the Haram Area, at the S.E. corner, on the lowest courses of the stone, about 70 feet below the surface of the ground, various letters and marks in red paint were discovered, which are now undergoing investigation by competent

scholars, and promise important results. See plan of these (No. 29 appended). For details, see Captain Warren's letter of January 2, 1869 (pp. 84—86.)

An interesting exploration of the Cave at Khureitûn will be found described in Captain Warren's letter of the same date (pp. 83, 84).

The Gate Gennath (so-called) has been explored at the desire of the Duke of Modena (see pp. 92, 93).

With these remarks on the contents of this interesting series of letters, the Committee place them in the hands of the subscribers to the Fund.

The Committee concluded the statement of progress, dated Jan. 1, 1869, by an appeal for fresh funds. They have to repeat this appeal. The work is dependent wholly on the subscriptions which are sent in month by month. The Committee have, with the very greatest reluctance, been compelled to instruct Lieutenant Warren to abandon all but the most important portions of his work—this, too, at a time when facts are fast accumulating, when the results of ruined Jerusalem are rapidly being wrested from the ruins, and when the promises that attended Lieutenant Warren's earlier efforts are being attended with success. To abandon these works at such a moment would be most lamentable; it would be to proclaim to America, to Germany, and to France, that England—the country where the Bible has been most loved and most studied—will not from her great wealth spare a few thousands yearly to carry on the work of elucidating and explaining the Bible history.

The Committee will not, however, believe that the work will be allowed to stop, and that other nations are to have the glory of completing what England has begun. They therefore beg their friends to become, each in his own circle, an advocate of the cause. There are, besides, many, especially among the clergy, who can help more efficiently in this way than by donations. The Committee especially beg these to consider themselves on the same footing as subscribers, and equally entitled to the publications of the Society.

To the whole body of the clergy of the Church of England; to the whole body of the Nonconformist ministers; to students of the Bible, of whatever opinions, the Committee especially make this

appeal. Those who are most interested in the results of the work should be most active in its promotion. Those who know the value of the removal of difficulties from the right understanding of the sacred text should be foremost in helping a society which has no other aim than to remove them, and no other reason for existence.

The subscriptions, including the proceeds of lectures and sums received on the Photographic account, amount, for the three months ending March 31, 1869, to the sum of £818 19s. 6d. The expenses attendant on the work are *necessarily* equal to this amount, and should be much greater. As it may appear desirable to stop the excavations during the heat of the summer, and thereby to lessen the immediate expenditure, the Committee hope that by a combined effort of their subscribers, enough may be raised to carry on the work afterwards with renewed vigour. Were every parish in England to contribute a single half-sovereign for this purpose, the money would be more than raised.

It is gratifying to announce the establishment of new Societies in Manchester, Birmingham, Newcastle, Northampton, Hertford, Dover, Peterborough, and Frome. At other places, too, gentlemen have been found to undertake the post of Honorary Secretary; and the Committee beg all who may be willing to help in this way to communicate with the Secretary.

Lectures have been given, and addresses made, on behalf of the Fund by the Rev. H. B. Tristram, F.R.S., the Rev. George Williams, Mr. Walter Morrison, M.P., Lieutenant Anderson, R.E., the Rev. Charles Boutell, the Rev. G. St. Clair, and the Secretary. Arrangements may be made for lectures at the next season. It is particularly requested that the Secretary be communicated with in the *first* instance, and that lectures be not given on this special work of the Society, in aid of other institutions.

The Committee are very gratified in being able to announce that the cause of the Palestine Exploration Fund is being advocated in America. They have to record their best thanks to the Rev. W. Budington, D.D., of Brooklyn, New York; to the Rev. Stephen Hubbell, of New York; and to the Rev. W. Patten, D.D., of Chicago, for offers of assistance.

In Chicago, the "Advance," a paper of large circulation, has kindly thrown open its columns to the advocacy of the Fund. It is

most gratifying to find that the labours of Lieutenant Warren are not only properly valued on the other side of the Atlantic, but that they are also likely to meet with solid assistance, as well as sympathy.

It is proposed to hold a public meeting in May or June next, which will be duly announced in the papers.

In order to make Lieutenant Warren's letters continuous, their pagination is separate from the rest of the pamphlet, and is carried on from the previous letters.

April 6, 1869.

BRIEF NARRATIVE OF THE PROCEEDINGS OF THE PALESTINE EXPLORATION FUND.

The following very brief history of the organisation and proceedings of the Society may be interesting to some of the subscribers who have not followed its operations from the beginning. It was first called into existence at a public meeting held in Willis's Rooms on June 22nd, 1865. The Archbishop of York, the present President of the Society, was in the chair, and among the speakers were the Bishop of London, Lord Strangford, the Right Hon. Mr. Layard, the Count de Vogüe, the Dean of Westminster, the Dean of Canterbury, Sir Roderick Murchison, Mr. Gifford Palgrave, Professor Owen, the Rev. H. B. Tristram, and Mr. Gilbert Scott.

It was decided that the objects of the Fund should be comprised under the following heads :—

1. Archæology.
2. Manners and Customs.
3. Topography.
4. Geology.
5. Natural History.

The first expedition, under Captain Wilson and Lieutenant Anderson, was despatched at the end of the year 1865, and was employed in Palestine for six months, at a cost of £1,500. During this time, the party constructed a series of maps on the scale of one mile to an inch, of the whole backbone of the country, from north

to south, including the Lake of Gennesareth and all the water-courses descending to the western shores. They collected materials for making about fifty plans, with detailed drawings of churches, synagogues, mosques, temples, tombs, &c.; they copied inscriptions, examined the remains of the ancient synagogues at Teh Hum, Irbid, Kefr Birim, &c.; they ascertained with a degree of probability never before arrived at, the positions of Capernaum and Chorazin; traced the ancient system of irrigating the plain of Gennesareth, and made excavations in the mound of Tel Salhiyeh, Damascus, at Kedes, and on Mount Gerizim.

This expedition was considered as preliminary, and it was not till Lieutenant Warren went out, in November, 1866, that the special work of the Fund can be said to have been seriously commenced. It was decided by the Committee that the chief strength of the Society should be directed to archæological investigation, and especially the examination of the ruins and *débris* of Jerusalem. Lieutenant Warren has not, however, neglected other objects, and the Society is indebted to him for a considerable amount of additional survey work.

His investigations at Jerusalem have revealed a condition of things never even suspected before. It was known that the modern city stood upon masses of *débris* and rubbish, but no one knew the depth of this rubbish, or the secrets that it hid. The story of the discovery of these secrets is contained in Lieutenant Warren's letters, published by the Society. They show that for a depth of sometimes 90ft. ruins of old buildings are found; that when at last we come to the well itself, chambers, vaults, aqueducts, and cisterns are found dug out of it: subterranean passages run through the city; that the foundations of great walls stand where the builders first laid them; and that the old walls of the Temple Area are still standing, buried 80ft. in rubbish, in as sound a condition as when they were first built.

There is no reason to doubt, not only that the true key to the settlement of *all* the vexed questions on the sacred sites is to be found by excavating, but also that Lieutenant Warren has hit upon discoveries which require only to be followed up to yield results of an exhaustive kind. Especially among these may be noticed the aqueduct and chambers at Robinson's Arch; the subterranean

passage at Wilson's Arch; the examination of the *débris* on the south of the Birket Israil; the prosecution of the shaft and galleries at the south-east angle; and many other points. The bearing of these on controverted questions, and on different passages of Scripture, cannot be discussed in a brief notice of the work, and ought not to be discussed till the work is finally settled, and conclusions can be made once and for all. But, as will be seen in another part of this pamphlet, the Committee are hampered for want of means to carry on the work.

LOCAL SOCIETIES.

The following is a list of local societies now in operation :—

Bath : *Hon. Sec.*—Rev. T. P. Methuen.
Birmingham: *Hon. Sec.*—Rev. Charles Evans.
Cambridge: *Hon. Sec.* — Rev. T. G. Bonney, Tutor of St. John's College.
Chester : *Hon. Sec.*—The Very Rev. the Dean of Chester.
Clifton and Bristol : *Hon. Sec.*—Rev. C. H. Wallace.
Dalkeith : *Hon. Sec.*—W. Bryce, Esq., M.D.
Dover : *Hon. Sec.*—Rev. W. Light.
Dundee : *Hon. Sec.*—R. Mackenzie, Esq.
Edinburgh : *Hon. Sec.*—Rev. W. Lindsay Alexander, D.D., and A. Keith Johnstone, Esq., LL.D.
Falmouth, for the County of Cornwall : *Hon. Sec.*—A. Lloyd Fox, Esq.
Frome : *Hon. Sec.*—Rev. A. Daniel.
Glasgow : *Hon. Sec.*—A. B. M'Grigor, Esq.
Greenock : *Hon. Sec.*—D. MacDonald, Esq.
Hertford : *Hon. Sec.*—Rev. T. Lingley.
Islington: *Hon. Sec.*—Rev. U. Davies.
Liverpool : *Hon. Sec.*—Rev. C. D. Ginsburg.
Malvern : *Hon. Sec.*—Rev. G. Fiske.
Manchester : *Hon. Sec.*—Rev. W. Crane.
Northampton : *Hon. Sec.* —E. F. Law, Esq.
Newcastle : *Hon. Sec.*—Thomas Hodgkin, Esq.
Oxford : *Hon. Sec.*—Rev. Professor Rawlinson.
Perth : *Hon. Sec.*—R. Jameson, Esq.
Peterborough : *Hon. Sec.*
Plymouth : *Hon. Secs.*—J. B. Rowe, Esq., and J. Shelley, Esq.
Warminster : *Hon. Sec.*—J. Morgan, Esq.

It will be seen that there are yet many important towns unrepresented by auxiliary societies. Friends are earnestly invited

to assist in promoting the formation of these. This can be effected most easily by means of a public meeting. The central office will be at all times ready to assist in every possible way. It will be borne in mind that the sum of money required yearly is not large, and that the Committee desire only to secure a sufficient number of small subscribers. At one or two local societies, for example, a five shilling annual subscription only has been asked for. It may here be mentioned that annual subscribers of a guinea, or collectors of that amount, are entitled, by a recent rule, to obtain annually three of the photographs of the Fund, on application at the office of the Society, and on payment of the postage.

COLLECTING CARDS.

These are prepared for any friends of the Society who may be willing to assist in this way. Ladies who have leisure are specially invited to undertake these. Collectors may inform subscribers that the Reports are published for all alike, whatever the amount of the subscription. Shilling and half-crown subscriptions are recommended. It is requested that the cards may be returned and exchanged for new ones every three months.

PHOTOGRAPHS.

These are now 349 in number, many of them being of places never before taken. They include, among others, views of the ruins of Teh Hum (Capernaum), Kerazeh (Chorazin), Jerash, (Gerasa), Kedes (Kedesh), and Sebastiyeh (Samaria); many spots in and round Jerusalem, Hebron, Damascus, &c.; and the district of Nablus, Gennesareth, &c.

They are sold, mounted, at 1s. 6d. each to non-subscribers, and to annual subscribers of one guinea or donor of £10, at 1s. each.

It is hoped that from the sale of these photographs a steady profit may accrue to the Society. Owing to the large sum required to lay in a stock of these photographs, which is at present about £250 in excess of the amount paid the Society for their sale, no

profit has yet been made. Agents have, however, been appointed, and the Committee will be glad to appoint agents in every town in Great Britain.

The following is a list of the Society's Agents:—

LONDON—Mr. Edward Stanford, 6, Charing-cross; Mr. Jeremiah Smith, 42, Rathbone-place, Oxford-street.
BIRMINGHAM—Mr. Henry Wright, Bennett's-hill.
BOLTON—Mr. Winstanley.
BRIGHTON—Mr. Attwood; Mr. George Wakeling.
CAMBRIDGE—Mr. Metcalfe.
DURHAM—Messrs. Andrews and Co.
EDINBURGH—Ordnance Survey Office, 4, St. Andrew's-square.
GLASGOW—Mr. David Robertson, St. Vincent-street.
HASTINGS, ST. LEONARDS—Mr. Dorman.
LANCASTER—Mr. Longman.
LEAMINGTON—Mr. Knibb.
LIVERPOOL—Mr. Adam Holden, Church-street.
MANCHESTER—Mr. Edwin Slater.
NEWCASTLE-ON-TYNE—Mr. H. D. Wilson.
NORWICH—Messrs. Jarrold and Sons.
OXFORD—Messrs. Parker.
SETTLE—Mr. Wildman.
TRURO—Mr. Heard.
WORCESTER—Messrs. Deighton and Sons.
YARMOUTH—Mr. Nall.

The Committee will be glad to appoint more agents, and take this opportunity of drawing the attention of their subscribers to the photographs as a means of helping the Society. The photographs are the cheapest series published of the Holy Land. Very many are of places never before taken, and are of great interest. The terms of agency are so arranged that the agent runs no risk whatever beyond the safe custody of the views. It is particularly requested that agents will send in a statement of accounts to the Secretary before December 31 and June 30, for views supplied and sold during the preceding six months. It is also requested that if agents find a delay of more than a fortnight between the despatch of an order and its execution, they will state the facts to the Secretary.

List of photographs may be had on application.

LECTURES.

Lectures have been given, meetings addressed, and papers read, on the work of the Society, as follows :—

Jan. 14.—Lancaster : Rev. H. B. Tristram, F.R.S.
,, 15.—Liverpool : Rev. George Williams.
,, 17.—Chester : Rev. George Williams.
,, 26.— ,, Rev. H. B. Tristram.
,, 30.—Newcastle : Rev. Charles Boutell.
Feb. 2.—Edinburgh, Society of Arts of Scotland : Rev. Charles Boutell.
,, ,, St. Augustine's Church : Rev. Charles Boutell.
,, 3.— ,, Royal Scottish Academy : Rev. Charles Boutell.
,, 4.— ,, Institute of Architects of Scotland : Rev. Charles Boutell.
,, 5.— ,, High School : Rev. Charles Boutell.
,, 7.— ,, Sermon at St. Thomas's Church : Rev. Charles Boutell.
,, 8.—Leith : Rev. Charles Boutell.
,, 8.—Dalkeith : Rev. Charles Boutell.
,, 9.—Hertford : Rev. Charles Boutell.
,, 11.—Dover : Rev. Charles Boutell.
,, 15.—Stafford : Rev. Charles Boutell.
,, 17.—Chipping Norton : Rev. G. St. Clair.
,, 18.—Ruridecanal Meeting at Mells, Somersetshire : The Secretary.
,, 22.—Canterbury : Rev. Charles Boutell.
,, 22.—Banbury : Rev. G. St. Clair.
,, 23.—Islington : Rev. Charles Boutell.
March 1.—Peterborough : Rev. Charles Boutell.
,, 2.—Northampton : Rev. Charles Boutell.
,, 4.—Abingdon : Rev. G. St. Clair.
,, 4.—Malvern : Rev. Charles Boutell.
,, 8.—Bristol : Rev. G. St. Clair.
,, 9.—Warminster : Rev. Charles Boutell.
,, 10.—Clifton : Rev. G. St. Clair.
,, 11.—Bristol : Rev. G. St. Clair.
,, 13.—Settle : W. Morrison, Esq., M.P.
,, 23.—Masonic Archæological Institute : The Secretary.
April 1.—Birmingham : W. Morrison, Esq., M.P.
,, ,, ,, Lieut. Anderson, R.E.
,, 1.—Manchester : Rev. H. B. Tristram.
,, 7.—Clifton : Rev. H. B. Tristram.
,, 9.—Bath : Rev. H. B. Tristram.
,, ,, W. Morrison, Esq., M.P.

It is requested that applications for lectures for the next season may be made to the Secretary at least three months beforehand. The clergy of all denominations are earnestly invited to avail themselves of this means to spread the knowledge of the work of

the Society. It is requested that lectures on the *special* present work of the Society, the excavations at Jerusalem, may not be given in aid of other institutions. The Secretary is authorised by the Committee to make arrangements for lectures, which entail no expense on the promoters.

NOTE.—Besides this list, lectures have been also kindly given by Rev. D. Kerr, of Dunse, and Edward Allen, Esq., of Alnwick, in advocacy of the Fund.

PUBLICATIONS OF THE SOCIETY.

1. Report of Preliminary Meeting, 1865.
2. Statement of Progress, with Captain Wilson's Letters, 1866.
3. Meeting at Cambridge, 1867.
4. Meeting at Willis's Rooms, with Address and Report of Lieut. Warren, June 11th, 1868.
5. Quarterly Statement of Progress, January 1st, 1869.
6. Lieut. Warren's continued Reports of Progress and Work, with lithographed plans.
7. Lieut. Warren's Notes on the Valley of the Jordan.
8. Quarterly Statement of Progress, April 1st, 1869, and continued Letters of Lieutenant Warren.
9. List of Photographs.
10. Dean Stanley's Sermon on the Exploration of Palestine. Price 6d., or 7d. by post.

Of these, Nos. 2, 4, 5, 8, *and future Quarterly Statements, are free to all Subscribers. The others may be had at a small price.*

EXTRACT FROM THE TIMES, APRIL 1.

JERUSALEM, March 13, 1869.

EVERY one who has seen the works, every one who, from reading or previous knowledge, is enabled to appreciate their value, must experience deep regret if these labours are to be brought to a close in consequence of want of funds. We do but little in the way of scientific or archæological research in other lands in comparison with France or Prussia. But here in Palestine, by the concurrence of fortunate circumstances, we have been enabled to obtain possession of a field of the deepest interest, which has been cultivated to great advantage so far, and has borne good fruit. If the good work is now allowed to languish, in a short time no trace of the results will be left.

There are thousands—many hundreds of them, perhaps—who do not care in the least to learn anything of the earthly Jerusalem that was once, and of which the ruins must be sought for deep in the earth beneath

the *debris* of centuries of conquest, siege, and convulsion. To them the discovery of the true foundations of the Temple of the Holy City, of the ancient aqueducts, subterranean passages, and grandiose engineering operations of the Scriptural Monarchs are of little moment. But there must be intelligence, piety, and wealth enough in England—as well as national pride and national determination—to contribute to the continuance of the researches which attract general sympathy and attention, and promise such a harvest in the future. There never will be such a chance as this again. The Turkish Government can scarcely be expected to view with favour excavations which lead down to the foundations of their own sacred stronghold in the City, but they cannot well withdraw from the permission accorded to the present explorers, although they see the very Haram itself perforated by shafts, and strange cranes, lifts, and pulleys at work in the Holy Enclosure of Omar. What has been already brought to light very probably affords a most imperfect measure of the results yet to be obtained. The most important problems in Biblical traditions and story which are keenly disputed over head may be solved by the underground workers in a few months, and the whole scheme of the architecture, of which we can as yet form very inadequate notions, may be revealed to us.

* * * * *

Jerusalem is filling fast with visitors in addition to the associated tourists. Many come to take part in or to witness the scenes which disgrace Christianity every Easter; others because it is in the programme of an Eastern tour; others from curiosity; a few actuated by the spirit which led so many weary feet and troubled hearts to the city of Zion. The blood-red standard floats with its white star and crescent from the walls of Jerusalem. Why should the Christian world give the Turk a moral victory too? In this contention of sects, and in the war of words, the Mahomedan sees in the very city of Our Saviour a proof of the errors of Christian faith, and finds a proud satisfaction in the catholicity of his own.

* * * * *

I end as I began, with an appeal to wealthy, religious, and Protestant England to sustain the Palestine Exploration Fund, in which no one can find room for just exception, derision, or animosity.

"ROB ROY" ON THE WORKS AT JERUSALEM.

The Times, April 5, 1869.

THE topographists and archæologists of the world have doubtless perused with deep interest the letters from Captain Wilson and Lieutenant Warren which from time to time have appeared in your columns on this subject, and which many newspapers in other countries have but reproduced. Though Jerusalem is now more than it has been for centuries

a focus of inquiry for the student and of interest for thousands of Moslems, and for all Christians and Jews who read their Bibles, yet there has been undoubtedly a dull apathy about the whole subject which it is difficult to account for, and which is only now being removed by what you have published as to the feasibility of bringing again to light at least an image of the magnificent grandeur of the Holy City in ancient days. Four weeks spent in diligent work among the ruins here have shown me that to see them properly would need as many months of energetic investigation; but, as most travellers here have only a limited acquaintance with the subject and a brief time to enlarge their knowledge, it may be for the benefit of new tourists—and they are now arriving in batches of 20 at a time—to be told what can be very well seen even in a single day.

For this purpose Lieutenant Warren meets us in the morning early, clad in a blouse of genuine mud colour, and a sergeant of Engineers carries long tapers for our dark promenade. Down the mouth of a square shaft a rope ladder is lowered until the brown bare legs of a swarthy native from Siloam can stand on the upper end. One by one our party lessens on the surface as each disappears underground, and our last glimpse of the upper world rests upon two enormous stones in the massive wall of Moriah, and which, by their curved edge projecting, show that once an arch was there. Dr. Robinson was the first traveller to remark this, so it is called "Robinson's Arch," and we are going down 50 feet below the present surface to see what can be found below of this old bridge at once hidden and protected by the *débris* of centuries.

The hole we are in is like a well, but it is lined with strong planks, and at the dark bottom our passage is through an opening as if into a kitchen grate, where we grope on all fours, with a hard knock on the head now and then, bending sideways too, as well as up and down, until suddenly the roof becomes rugged and crooked, indescribably contorted by angles, all of them the corners of well-cut stone. For here we are in the confused heap of huge voussoirs or arch-stones which, once high in the air, spanned gracefully the rocky vale between Zion and the Temple. At the siege of Jerusalem Titus parleyed with the Jews across this gorge, and then these stones were hurled down here, and with what a crash! Upon them, hidden by their own ruin, new buildings arose and gardens flourished. These also were laid low, and on the desolate mounds the present houses stand. The Jerusalem we see to-day is not the real Jerusalem. That is buried under 50 feet of wreck and confusion, but in its forced silence somehow it speaks eloquently, bidding the Christian and the Jew to heave its burden off, to open the dark to light and air, and to read in the covered relics the story of past times. Therefore we look up and around on these old stones, and seem to listen with an inquiring gaze, for nothing of their rich bold masonry has been spoilt by this turmoil above. Old as they are, we notice among them one stone below the rest, and yet more hoary than the others. It is part of a still more ancient bridge across the rocky cleft, which then was steep at the sides, but now is filled up by dark silence. David in former days may

have marched over here. Certainly many kings and prophets after him have trod upon these stones.

Tanks, cisterns, aqueducts, pavements, here open to us underground. Once we have got down we can scan by the magnesium light a subterranean city, the real city of Jerusalem. The labour of building this, and of now mining into it when buried, is forgotten in wonder as we gaze on the silent relics or wander about the caverns echoing a hollow voice. But for this we must be agile, like cats or monkeys, and follow Mr. Warren complacently crawling on his back through a dark crevice. Another great arch, called Wilson's, also now buried, may be visited without such gymnastics. This also spanned the same valley, and the rock-cut passage for troops may be followed as it winds among ample halls, until we are suddenly barred by the walls of a modern house, which is an end terribly prosaic for a romantic journey.

Here we are reminded of the numerous and great difficulties to be overcome before even one excavation of this kind can be made in Jerusalem, and of the many different people with whom Lieutenant Warren has to deal. First, there is the Supreme Government, then the local Pasha, the Pope, Patriarch, or Archbishop of Christian sects, the Rabbi and Moslem too, the owners of the soil, the military, the tenants of the houses, the surrounding neighbours, the Consuls of various Powers, the excellent sergeants and corporals of English Engineers, the native workmen, and, finally, the British public, who, perhaps, expect that we should find at once, and in a city twenty times razed and as many times pillaged and harried when in ruins, fine marble statues or golden censers, or even the manuscripts of the Bible. Relics such as these are, however, to be found chiefly in tombs or other sacred spots, and it is precisely there that prejudice or allowable sentiment opposes to our search a barrier harder than porphyry. Even through these difficulties many curiosities have been sent to England by Lieut. Warren, and nine cases of those newly found will be shipped in the steamer with me. Still these are not the main object of our search, though it must be allowed that the larger and more philosophic design of our explorations will always be more appreciated by those who come here and see what has been uncovered than by those who are at home and who see only the sculptures, pottery, or numismatic lore incidentally obtained and brought back to England.

Impressed more than ever with the importance, the extent, difficulty, and interest of the work, its necessary expense and permanent value, we climb again up the rope ladder. Daylight regained seems bright, cheerful, and warm, but somehow too garish also. No mind worth having but must have been stirred deeply by the sudden scene below. The thoughts down there are now like the dream of a past night, when we awake to a common workday morning, and soon the calm Moslem with his bare legs rolls up the ladder in a pile upon his back as we follow down the valley to "Job's Well." Near this Mr. Warren once wriggled through a dark hole in the rock and opened up a splendid tunnel. At each 200 feet are long sloping stairs from this to the ground above. Through each of these, now fully opened, we can look down and

almost see the clear water which runs rippling at the bottom, coming whence no man can tell, but it wells up plentifully at the end, and then runs along the valley till the roots of thirsty olive-trees lap it up dry, and you may ride on for hours below in the course of "the brook Kidron" only upon hot stones bleached white in the sun.

A little farther up this valley we look into a deep cave where the Virgin's fountain is running in smooth pools of rock. A network of water channels was once under Jerusalem, perhaps not less wonderful than the towers and pinnacles and palaces in the daylight above. Few men have dared to follow Mr. Warren in the amphibious tour of the Jerusalem watercourses. In this one, for instance, the water comes first from the Pool of Siloam, and it swells up high at uncertain moments as you squeeze through a passage in the dark, wet up to the shoulders, and where the chin must be raised at "high tide" to keep nose and mouth from being filled. Mr. Warren, indeed, seems to have a subterranean turn of mind, and it is fortunate when one's duty and one's inclination are both in the same direction. To-day we were privately visiting the Haram enclosure, where the level sward of green is gorgeous with spring flowers in bouquets here and there round the old pillars or marble blocks. Suddenly Mr. Warren resolves to raise one particular stone of these, and ropes, levers, and ladders were speedily at work. The old Sheikh of the Temple Area (a sort of Moslem Dean and Chapter in one man), intensely bigoted, but outwardly complying, sits restless on the grass, now and then groaning deeply, as he sees the Englishman disappear into a great cavern, the last of the cisterns examined in this hollow-sounding, grassy square. After measuring this below, by swinging to and fro on a rope in the hollow gloom fitfully lit up by his magnesium light, Mr. Warren entered a small hole in the turf above, where one could scarcely expect a terrier to go in, taking leave of us all, with a good-humoured joke to the anxious Sheikh, who forced a grim smile into his face, evidently half-fearing, half-worshipping the mysterious intruder he was set to watch. After all, a touch of craziness insures respect among these Moslems, and often I found myself that the Arabs dared not injure the being who could float in a boat alone. After 20 minutes of suspense we heard a cheerful "Hallo!" far off and in a totally unexpected direction, and there was Mr. Warren erect again on the surface some hundred yards away, having traversed a new passage under the grass in total darkness, and creeping on his side. A bit of magnesium was given to the grave Sheikh in reward for his easy guardianship. The old man took it like a child, and thanked the giver, but with a more audible groan.

Next we can enter a shaft near the "Golden Gate" of the Temple, where two beautiful arches in the exterior wall mark the exact spot at which the Moslems are sure the "Nazarenes" must one day enter the Holy City finally to conquer all.

What management and diplomacy had to be used to open a shaft in such a place! Nor can we wonder that the Turk should refuse a stranger

leave to dig quite close to his cherished *sanctum*. Even the Dean of Westminster, so valuable a co-operator on the committee of the Palestine Exploration Fund, would be reluctant to allow a Turkish officer of Engineers to dig by the east buttresses of Westminster Abbey. So we enter the shaft in the Valley of Jehoshaphat with a piquant curiosity, and deep down it goes through acres of shingle and rubbish, scattered here thick for ages, till our feet are in the very rock itself where Solomon's builders laid their huge stones noiselessly. A gallery from this for 70ft. finds the rock surface sloping upwards. In five minutes, by the aid of a few sketches and sections, we can picture to the mind that noble and sheer cliff, which is here as grand as ever, but only covered by the dusty heaps we see outside. Weeks must be spent, though, in mining by steps along this rocky steep. At any moment the pickaxe may strike on a hewn-out gateway. Already, while I write, it has disclosed a mysterious pillar, pendent and deftly marked by signs; and as each spadeful of brown earth is dug away the hopes are raised of some long-lost inscription being uncovered while we stoop with pale candles to spy out what is at once so old and so new.

The worst of it is that sights like this can be seen only on the spot. We cannot bring home to England the uncovered rock of Moriah. By raking over the *débris* of centuries once more, no doubt there would be numerous relics found which might be portable, and being shown in London would stimulate the generosity of friends who listen with apathy now to descriptions of what is doing here for the discovery of Jerusalem itself, rather than of the ornaments of the Jews. These detached relics and the *débris* which entombs them are the very things which must be barred out, and so are concealed at present by the wood lining of the shaft which is sunk through them all to get into a deeper knowledge of the great buildings as they stood.

Many visitors, and from all parts of the world, descend these shafts during the travellers' season. Ladies can be lowered down in chairs. Strong ropes are used for safety when the timid might be nervous on the ladder alone, and large parties at a time, even thrice in a day, have the benefit of Lieutenant Warren's kind and valuable explanations by candle-light, so that gradually there will be interest excited on this subject among intelligent people everywhere. But the earth we dig in is often so insecure that it would instantly collapse if without support, and the wood required for this is so expensive here that the frames of timber cannot be spared from constant successive employment in other shafts. Therefore, many of the most curious galleries opened up have had to be filled again, and only their records remain in picture and photograph and the memories of travellers. Many shafts, again, are sunk with only negative results, and after weeks of toil, amid danger, and at great expense, it is discovered simply that "nothing is there." But this "nothing" is like the cipher among figures. Some day, perhaps even to-morrow, the appropriate integer will be discovered which converts the cipher, useless by itself, into the record of an important discovery, like a 0 read with 9 before it,

instantly becoming nearly 100. Of course I am not now epitomising what has been explored above ground or below by the committee, but what can be seen even in a brief visit to the dark beneath. Besides much in the Holy City, much has been most carefully examined in country parts, and the map of Palestine, so long imperfect, is now being corrected or completed. Each traveller who has the object at heart may add, as many do, to the gradual but accurate knowledge of the land, the buildings, the manners, the plants, the animals, the climate, and the former life that belong to this country. Some who are far off can help by their purses, others by their pencil or their pen, and even the canoeman by his paddle. But, after all our walks by daylight among the inexhaustible ruins above ground, there is still the conviction abiding that the roots of our problem are in the deep below, and that much of it must be solved by candle-light.

It is hard exercise, but healthful and appetising, to climb up and down these shafts; yet we may include in our day's work a visit to shaft 52, its number telling how many others must be left unseen. This goes straight through the rubbish at the south-east corner of the old wall of Jerusalem. Above us, rising proudly still, is the ancient angle of the Temple area, which overhangs the valley steep below, 200 feet. Most likely it was on this, or on a pinnacle near, that our Lord was placed in his threefold temptation. Even now the wall is 70ft. high above ground, the most expressive feature of the Holy City seen from without in the profile of Jerusalem. At a depth of nearly 90ft. below the present ground, near the wall, we reach at last the corner stones of the venerable building, so that what we have looked up to before as lofty was seen only from a false base of rubbish, heaped up high and concealing the real rock, and robbing thus the Haram wall of more than half its veritable height. Even above the present surface the stones are huge as well as ancient, and at the bottom they are equally massive and beautifully cut. The rock itself is bared at last upon which the marvellous structure rests. Where each lowest foundation stone lies upon it we can see the rock has been levelled to receive its brethren. Here, and only here, are chippings from the chisel. The stones, indeed, were finished by Divine command before they were placed, but the mason's tool had to be used on the live rock as it lay.

In one part there had been even then some rubbish alongside, and this had been cut out to admit the lowest stones. Among this ancient *debris* I was fortunate enough to pick out the tooth of a camel, which must have lived among the Jebusites before even this old wall was built.

It is on these lowest courses of stones, most of them very large—one more than 17ft. long—that you can see by candle-light the curious letters, or, at any rate, characters, in red paint, of which full particulars have been published in your columns. These letters are numerous, distinct, and large, and others are actually cut in the stone, but all of them are complete puzzles to the best scholars here, and the decision of the English, German, and French *savans* as to their meaning is awaited with deep interest.

The colour of the pigment used for these letters varies in appearance from time to time as you revisit them. Perhaps a few weeks more may efface some of these marks entirely. Meanwhile, I determined in my last visit to them to-day to imitate the actual tints as well as possible by water-colours and on paper. On bringing up these copies to daylight it was at once remarkable how differently they appear in the sun's rays from what they do in the galleries below, where only candles or the magnesium light have shown them to the curious visitor.

It is disheartening to be told that, from want of funds to keep this shaft open and the wood lining of it properly renewed, even this very interesting sight must be only temporary, and that the approach to it must be closed again in a few weeks from this time, for the wood will not last much longer safely. Meanwhile, the travellers here have availed themselves of a precious opportunity. An American lady was lowered down the shaft in a chair last week, the first lady who has seen these ancient writings. Mr. Simson, whose drawings are so widely known in the *Illustrated London News*, from the Crimea, and Abyssinia, and the Brindisi route, descended with his sketch-book yesterday. It is hoped that the Marquis of Bute will go down the shaft this week; and perhaps some man who has heart, and head, and money will enable the "Palestine Exploration Fund" at least to keep the shaft open and in secure repair, even if it be left to our posterity to clear away all the rubbish that clogs the splendid wall of Jerusalem, and to lay open to the sun, and to the eyes of the world, the long covered splendours which are still below, after so many wars and fires and razings and the gnawing of ruthless time.

Yours, &c.,

Jerusalem, March 9. ROB ROY.

LIEUT. WARREN ON "THE TEMPLE OF HEROD."*

(*Athenæum.*)

JERUSALEM, *Dec.* 4, 1868.

FROM our present knowledge of the Haram area we may draw the inference that the southern wall is that spoken of by Josephus as the south wall of Herod's enclosure; for we have the Ophel wall joining in, at the south-east angle, at what would have been the eastern cloisters, and we have the arches of Robinson and Wilson on the west; and the great difficulty now is, the dilemma about the dimensions given by Josephus: for while, on the one hand, he leads us to suppose that the Temple enclosure of King Solomon was in compass four furlongs, and that the area was doubled by Herod; yet, on the other hand, he gives us

* This paper is reprinted, by the kind permission of the editor, from the *Athenæum*, where it appeared. It is not printed among the continuous letters, as it does not deal with the direct work of Lieut. Warren.

six furlongs as the compass of Herod's enclosure, including Antonia; so that it is an open question as to what the exact measurements were.

We have, however, in the present walls certain conditions given to us in Josephus' account of Herod's Temple, and it may be interesting to apply to the Haram walls a plan of that ancient enclosure. For this purpose I have taken the plan of the Temple constructed by the Rev. John Lightfoot, D.D., in 1664, because it was made (by his own account) entirely from the ancient writings; his mind being unbiased by any knowledge of the present Haram enclosure. I have taken his southern wall and applied it to the south wall of the Haram area, lengthening it until they coincide, and at the same time increasing all the parts to scale. We have, then, a plan of Herod's enclosure, occupying the southern part of the Haram area, and being a square of about 900ft. a side; its compass being six furlongs.

We note the results. The two Huldah gates of Dr. Lightfoot rest upon the double and triple gates of the south Haram wall. His causeway, one of his gates to the suburbs, and his gate to the city, are each respectively represented by Wilson's arch, Barclay's gate, and Robinson's arch, except that he pushes each of them up about 50ft. too far to the north; his fourth gate to the suburbs he places south of (Wilson's arch) his causeway, and it is not represented by any gateway that we have been able to find; but there is, north of Wilson's arch and south of Bâb al Mathara, a passage through the Haram wall, corresponding to some extent with Barclay's gate, which may be supposed to be the other gate to the suburbs. To the north he places Tadi in the centre of the wall, but we find a rock-cut passage closely corresponding to Tadi, not in the centre of the wall, but at the same distance from the west cloisters as is his West Huldah gate (double gate) in the south wall. On the eastern side, his east gate is not represented by anything we have found on the ground; but close to his north-east angle there is a break in the Haram wall, about 895ft. from the south-east angle.

With regard to the Temple itself, we find that his southern and eastern sides nearly coincide with the south and east walls of the Mosque platform; also that the altar stands over a curious rock-cut passage that now is used as a tank, and which is supposed by some to be a passage blocked up. Then, in the inner Temple enclosure, we have the gates Nitsots and Mokad: Nitsots is immediately over the Sakhra cave, and Mokad is in the production of a passage leading to where we have lately placed Tadi. With regard to the connexion between Tadi and these two gates of the inner Temple enclosure, we will inquire directly. Dr. Lightfoot's position of the room of the draw-well does not lie over any tank that has yet been discovered. We have now, between Dr. Lightfoot's plan and the present Haram area, a number of points of resemblance which are sufficient to draw serious attention to the matter; but out of them there are two or three points which tell almost equally in favour of those plans in which the altar is placed near to the Sakhra.

Dr. Lightfoot's plan is favourable to any theory which makes the south wall of the Temple enclosure coincide with the south Haram wall; for he states (and as far as we are aware he had no knowledge of the Haram area) that "the gates were so set as that there was an equal space between gate and gate, and betwixt either gate and the corners of the wall;" and further—"And so is Josephus to be understood when he saith 'the fourth part of the wall was to the south, and had gates in the middle.'" This is of importance, as the fact of the double gate being on the western side of the Haram south wall has been used as an argument against the ancient enclosure extending farther east than the triple gate; the double gate being generally taken as two Huldah gates.

I have before suggested (December 21, 1867) that, from its appearance, the double gate originally extended only 190ft. from the south wall, and on another examination I found that two tunnels of the triple gate extend the same distance to within 5ft., and that originally the so-called triple gate was a double tunnel; proof of which will be found on examination of the $\frac{1}{500}$ Ordnance Survey plan. The double gate and the double tunnel of the triple gate have then on plan a general resemblance to each other both in length and width, though their superstructures differ materially. We will now examine the connexion between Tadi and the gates Nitsots and Mokad.

We are told that the meaning of the word *Tadi* is "obscurity." The Jerusalem translation of the Mischna says, "Tadi served for no (ordinary) purpose," and further, "that it was used by the priests to retire by, should they have become defiled during their service in the Temple." We read further on, "All the gates there had lintels, except Tadi; there two stones inclined one upon another." There we read again that the gate Nitsots "had a door into the *chil*, and that to the house Mokad were two doors, open to the *chil*." Again, with regard to the house Mokad, "in the north-east (chamber) they descended to the House of Baptism;" and again, the priest "rose and went out in the gallery that ran under the arch, and candles flamed on either side until he came to the House of Baptism." Rabbi Eleazer, the son of Jacob, says, "in the gallery that went under the *chil* he passed out through Tadi." Dr. Lightfoot, in his commentaries, says that the priests after suffering defilement "were to bathe as was said before, and the way to the bathing-place is expressed in these words: 'He goeth down a turning staircase that went under the Temple.' Therefore it is hard to say which way this passage to the bathing-place lay, since the word will enlarge it to any part of the Temple. It appeareth it was some vault underground through which they passed; into which vault they went down by a turning pair of stairs, out of the north-west room of Beth Mokad. And from thence whither they went, whether under the *chil*, as Rabbi Eleazer conceiveth, or under some part of the court or mountain of the house, it is but in vain to search; it seemeth the bath was underground, and a room by it with a fire in it to warm themselves at when they had done bathing." We have then the certainty that the passage from Mokad to the House

of Baptism was underground, and the inference that Tadi was on the same level and underground also. Now, looking at Dr. Lightfoot's plan, placed over the Haram area, we have already seen that Nitsots is over the passage down into the Sakhra, and that there is a passage running in the direction of Mokad, and which appears to unite with Tadi above the northern edge of the Mosque platform, at a point where there is a hollow sound as of vaults underneath.

These remarks on the application of Dr. Lightfoot's plan to the Haram area may be useful to those who are interested in locating the Temple enclosure; but we seem to be a long way yet from fixing the position with any degree of certainty. I may remark that Dr. Lightfoot endeavours to reconcile the gates of Herod's Temple enclosure, as spoken of by Josephus, with those of the Temple erected by King Solomon, so that his readers are apt to get confused between the two; our own path appears rather to be to locate correctly the Temple as erected by Herod, and then we may safely pass on to that of more ancient date.

CHARLES WARREN, R.E.

LIST OF SUBSCRIPTIONS.

JANUARY 1st TO MARCH 31st, 1869.

a denotes Annual Subscriber.

	£	*s.*	*d.*
Samuel Green, Esq.	1	1	0
Rev. C. J. Martyn	1	1	0
J. W. Swinburne, Esq.	1	1	0
Captain Campbell	1	1	0
J. T. Agg Gardner	1	0	0
Small sums, per Samuel Green, Esq.	3	4	0
Foundation Lodge, No. 82	2	2	0
G. Murray, Esq.	1	0	0
Rev. M. B. Darby (2nd don.)	3	0	0
*a*Mrs. Lavie	1	1	0
P. M. Thornton, Esq.	1	0	0
Rev. W. S. Fowler	1	1	0
*a*Mrs. Hancock	1	1	0
Rev. C. H. Hole	1	0	0
*a*Rev. G. Christian	1	0	0
*a*Major-General Nuthall	1	1	0
*a*Rev. John Stoughton	1	1	0
*a*Rev. J. B. Harrison	1	0	0
J. H. Tuke, Esq.	2	2	0
Alfred Davis, Esq.	10	10	0
*a*Miss C. H. Martin	1	0	0
*a*Miss Emmett	1	0	0
*a*Rev. E. D. Stone	2	2	0
*a*Mrs. Barrington Mills	1	1	0
*a*H. Richardson, Esq.	1	1	0
*a*Rev. T. G. Rooke	1	1	0
Chas. Morrison, Esq. (2nd don.)	25	0	0
*a*Thos. Ward, Esq.	1	1	0
Ed. Nuth, Esq.			
*a*Rev. G. W. Ommaney	0	10	0
*a*A. E. W. Goldsmid, Esq.	1	1	0
Octavius Wigram, Esq.	5	0	0
— Humphery, Esq.	0	2	6
*a*Rev. Melsup Hill	1	1	0
*a*W. J. Peebles, Esq.	1	1	0
*a*C. Innes Pocock, Esq.	1	1	0
Mount Zion Chapter Royal Arch, No. 22	5	5	0
*a*W. Wilberforce Morrell, Esq.	0	10	0
Mrs. Archibald Bishop	1	1	0
Rev. W. H. W.	1	10	0
*a*G. B. Crewdson, Esq.	1	1	0
B. Dawson, Esq	5	0	0
Some Little Boys at Reading	0	2	6
A Widow's Offering	0	5	0
*a*Rev. J. Hewetson	0	10	0
*a*Rev. Vernon Musgrave	1	0	0
W. H. G.	5	0	0
*a*Frederic Howard, Esq.	2	2	0
*a*Rev. J. H. Moore	1	0	0
*a*Rev. H. H. Westmore	1	1	0
*a*Rev. F. Binyon	0	10	0
G. Mackenzie, Esq.	0	10	6
James Ramsay, Esq.	1	1	0
*a*John Duncan, Esq.	1	1	0
G. J. R. Gordon, Esq.	5	0	0
"Sir Isaac Newton University" Lodge	5	5	0
Rev. Vernon W. Hutton	1	0	0
Mrs. Trevor	1	1	0
*a*J. G. Greenwood, Esq.	1	1	0
*a*Thomas Simson, Esq.	1	0	0
Francis Freeman, Esq.	1	1	0
H. Charlewood, Esq. (2nd don.)	10	0	0
Prov. Grand Lodge, Leicestershire	1	1	0
St. John's Lodge, No. 279	1	1	0
John of Gaunt Lodge, No. 523	1	1	0
Chapter of Fortitude, No. 279	1	1	0
Ferrers and Ivanhoe Lodge, No. 779	1	1	0
Rutland Lodge, No. 1130	1	1	0
*a*Rev. Thos Pascoe	1	1	0
*a*Rev. J. W. Packe	1	1	0
*a*J. M'Kinnell, Esq.	1	1	0
S. Lloyd, Esq.	20	0	0
Mrs. James Richardson	1	1	0
*a*Rev. W. H. Davey	1	1	0
Rev. W. W. Herringham	1	1	0
Miss S. Lane (2nd don.)	0	10	6
*a*C. H. Hawkins, Esq.	0	10	0
*a*Rev. Thomas Helmore	0	10	0
Blaydon Lodge, Blyth, No. 659	1	1	0
The Countess Annesley	1	1	0
Rev. E. W. Serjeant	1	0	0
Rev. Lord Charles Hervey	5	5	0
Miss E. T. Martin	0	10	0
John Hervey, Esq.	21	0	0
*a*Rev. W. D. Maclagan	1	1	0
James Monteith, Esq.	2	2	0
M. E. Petavel-Olliff	1	1	0
G. D. Wingfield Digby, Esq.	10	0	0
Sir Francis Crossley, Bart.	10	0	0
Rev. J. E. B. Mayer	10	10	0
Friends, per Rev. D. Anderson	1	1	0

	£	s.	d.
Felix Francis, Esq. (2nd don.)	1	0	0
Rev. T. G. Bonney	2	0	0
*a*Mrs. Townsend	1	1	0
Rev. W. H. Plummer	20	0	0
W. Bennett, Esq.	5	5	0
Mr. Sweetman	0	5	0
Miss Hornidge (2nd don.)	1	0	0
Friends, per Miss Hornidge	1	10	0
Professor Sedgwick	5	5	0
Miss Baxter, of Ellangowan	25	0	0
Rev. W. W. Patton, D.D., Chicago	2	0	0
All Souls' Encampment, Knights Templars	2	2	0
St. Wulfstan Royal Arch Chapter	2	2	0
Mrs. Donaldson	0	2	6
Josiah Evans, Esq.	10	0	0
Joseph Evans, Esq.	10	0	0
Messrs. Cassel, Petter, and Galpin	2	2	0
Miss Robson	1	1	0
Rev. H. J. Sharpe	0	10	0
*a*F. Wilbraham, Esq.	1	1	0
Miss P.	1	0	0
Edward Harvey, Esq.	0	5	0
Lady Mary Saurin	1	0	0
Mrs. Rouse	0	5	0
*a*W. Macnamara, Esq.	0	5	0
W. P. Elsted, Esq.	1	0	0
W. P. Mummery, Esq.	0	10	6
Rev. A. Clarke-Smith	0	2	6
Rev. J. S. H. Horner	25	0	0
Per Miss Leach	1	6	0
The Misses Richardson	1	0	0
Mrs. Peppin	1	0	0
F. M.	5	0	0
Mrs. Stone	5	0	0
Miss Haynes	1	0	0
*a*Rev. H. B. Burney	1	1	0
*a*Rev. F. G. Burnaby	2	0	0
*a*Miss Anna Glossop	0	5	0
Syria Improvement Committee	250	0	0
*a*Rev. T. Woodruffe	1	1	0
*a*W. Bliss, Esq.	1	1	0
Miss Lockwood	1	1	0
*a*Rev. A. B. Donaldson	1	1	0
Sir Henry Dryden, Bart.	5	0	0
*a*Rev. W. G. Cowie	0	10	0
W. T. Mummery, Esq.	0	10	0
G. Richmond, Esq., R.A.	1	1	0
J. W. Overbury, Esq.	1	1	0
*a*W. Newburn, Esq.	1	1	0
*a*W. Edmunds, Esq.	1	1	0
Rev. R. W. Church	1	0	0
Rev. Thomas France	5	0	0
*a*Rev. U. Davies	1	1	0
T. G. Keele, Esq.	0	10	6
J. Anstey, Esq.	1	1	0
*a*Rev. Nicholas Whitley	1	1	0
Rev. W. T. Turner	1	0	0
Rev. H. R. Moody	1	1	6
Major M'Donough	0	10	0
*a*Mrs. Hancock	1	1	0
*a*Rev. E. S. Dewick	1	1	0
J. Osborne, Esq.	0	10	0
Per Dean of Chester	7	10	0
Rev. C. H. Wallace	1	1	0
Lord C. A. Hervey	1	1	0
*a*Rev. L. C. Cure	2	0	0
Colonel Trefusis	2	0	0
Edward Bailey, Esq.	3	3	0
*a*Rev. A. L. W. Bean	0	5	0
Provincial Grand Lodge, Yorkshire	10	10	0
*a*Ed. Adamson, Esq., M.D.	3	3	0
*a*W. S. Adams, Esq.	1	1	0
*a*Warden of St. Augustine's College, Canterbury	1	1	0
Anonymous	0	2	6
D. P. Evans, Esq.	1	1	0
Mrs. Baxter	0	5	0
Mrs. Townsend	1	1	0
W. Skerring, Esq.	1	1	0
Mr. J. Dermott Thomas	0	10	6
W. Bassen, Esq.	1	1	0
J. Sells, Esq.	1	1	0
J. Harding, Esq.	1	1	0
Major H. D. Battye	1	0	0
W. Farrer, Esq.	10	0	0
— Cawker, Esq.	1	1	0
— Davis, Esq.	1	1	0
— Watkins, Esq.	0	5	0
*a*Rev. R. E. Bartlett	0	10	0
Rev. L. R. Hamilton (£1 *a.*)	5	0	0
Lieut.-Col. Smyth (2nd don.)	2	0	0
*a*Miss A. Hunter	1	0	0
Rev. H. B. Hale	1	0	0
*a*Rev. E. B. Badcock	1	1	0
T. W. Vessey, Esq. (5s. *a.*)	3	8	0
Rev. Thos. Harding	0	10	0
Mrs. Robinson Fowler (2d don.)	1	1	0
Capt. Carr, Madras	1	1	0
C. G. Walker, Esq., Madras	1	1	0
Rev. H. de Bunsen	2	2	0
*a*Rev. H. K. Richardson	1	1	0
United Encampment of St. Almeric and St. Geoffrey, Bolton	5	5	0
F. D. Mocatta, Esq.	5	0	0

LECTURES, &c.

		£	s.	d.
Proceeds of Lecture at Dover by Rev. C. Boutell, per Rev. W. E. Light		5	12	3
Proceeds of Offertory and Address at Mells, by the Secretary		5	0	3
Proceeds of Lecture at Chipping Norton, by Rev. G. St. Clair		2	7	6
Ditto	Banbury, by Rev. G. St. Clair	3	17	3
Ditto	Abingdon, by Rev. G. St. Clair	2	11	8
Ditto	Liverpool, by Rev. G. Williams, per H. Duckworth, Esq.	10	10	8
Ditto	Stafford, by Rev. C. Boutell	2	9	6
Ditto	Peterborough, by Rev. C. Boutell	4	9	0
Ditto	Bristol, by Rev. G. St. Clair	8	4	1
Ditto	Hertford, by Rev. C. Boutell	0	12	5
Ditto	Swansea, by Rev. G. St. Clair	2	14	1
Ditto	Warminster, by Rev. C. Boutell	0	11	6
Ditto	do. by D. Kerr, Esq.	4	19	6
Ditto	Londonderry, by Rev. Dr. Porter, per Captain Conolly Skipton	23	3	9

These returns do not represent private subscriptions acknowledged in the preceding columns; these, in many cases, were considerable. By the agency of the lectures of Mr. Boutell, Local Societies have been established at Dover, Hertford, Peterborough, Newcastle, Northampton, Canterbury, and Islington.

ERRATUM.

The Donation of J. W. Thrupp, Esq., of £20, was omitted in the last published Statement of Progress (January 1, 1869).

THE

PALESTINE EXPLORATION FUND.

STATEMENT OF PROGRESS.

The Second number of the Quarterly Statement of the Palestine Exploration Fund is presented to subscribers a few weeks before it is due, mainly in order that it might be ready in time for the annual meeting. It contains, besides the usual packet from Lieutenant Warren, papers from Captain Wilson, Mr. Deutsch, and other which it is hoped will not only prove interesting, but will advance our knowledge of the Holy Land.

The main features of interest in the work of the last two months are the excavation at the "Golden Gateway" and "Barclay's Gateway" at Jerusalem, the discovery in the Dome of the Rock ("Mosque of Omar"), and Mr. Deutsch's report on the marks found at the south-east angle of the Great Wall of the Haram es-Shereef. It is not the province of the Committee to draw deductions from facts. These are laid before their supporters as found, leaving it for others to make inferences from them. They cannot, however, avoid calling attention to the conclusions arrived at by the eminent Semitic scholar just named from the marks in question, which he examined on the spot, and on which he has favoured the Committee with a letter, which will be found reprinted at p. 33. The stones appear to be *in situ*, some of the marks which they exhibit are similar to those on "absolutely undoubted antique Phœnician structures in Syria," while "fantasias," "identical" with others of the marks, are observed in abundance on the "old Phœnician stones" of the ruined citadel above Saida. It is greatly to be hoped that more marks will be found, and some nearer approximation to date arrived at. Lieut. Warren's tracings of those on which Mr. Deutsch has commented may be seen at the office of the Society.

The shaft at the Golden Gateway has been abandoned, owing to the

danger of continuing the work. One of the chief obstacles, indeed, to the pursuance of the galleries is the way in which the shingle sometimes pours into them—not in small quantities, but in a continuous shower, which will last sometimes for days, choking up the narrow galleries, and forcing Lieutenant Warren to abandon the work, or to continue it at the risk of life.

The work which has to be done is still very great. It is hoped that permission may be obtained to pursue the tantalising discovery below the surface accidentally made by Mr. Warren at the northern edge of the Platform of the Dome of the Rock within the Haram Area in December last, and to explore elsewhere within that sacred enclosure; failing this, reference to the Report of the last Executive Committee published below, will show some of the work which yet remains on the hands of the Society.

At the meeting of the General Committee, held on May 4th, at the Jerusalem Chamber, the Executive Committee resigned and a new Executive Committee were elected for the ensuing year. Their report was read and adopted, the thanks of the Committee were passed to Lieutenant Warren, to Mr. G. J. Eldridge, Dr. Chaplin, and Mr. Walter Morrison, M.P., and it was resolved that an annual meeting should be held.

It has long been the desire of the Committee to open a Palestine Museum. They are now enabled, by the arrival of several large cases from Lieutenant Wrren, to carry this desire into effect for a short period. At the Dudley Gallery, Egyptian Hall, will be found all the objects of interest discovered by Lieutenant Warren in his shafts, including lamps, pottery, glass, coins, weapons, tesselated pavement, sculpture, sarcophagi, and geological specimens. The tracings also of his work, and those of Captain Wilson, may also be seen there; with objects lent by Mr. MacGregor and other gentlemen. To these will shortly be added, it is hoped, the new collection of photographs and antiquities from Sinai, by the kindness of Colonel Sir Henry James, Director-General of the Ordnance Survey. The exhibition will be closed on August the 31st. Should it prove so far successful as to warrant the repetition, it is hoped to reopen it on a future occasion.

The receipts for the months April and May, with the first half of June, amount in all to £1,084 6s. 2d., including a donation of

£250 from the Marquis of Bute; one of £100 from "Anonymous"; and remittances from the local societies of Clifton, Bath, Tunbridge Wells, Falmouth, Nottingham, Plymouth, and Newcastle. The receipts for the first five months of the year amount, from all sources, and including the balance at the end of 1868, to about £2,150. The Committee beg their readers most earnestly not to let the work fail for want of funds. In providing them, at considerable expense, with this quarterly publication, the Committee invite them to use it in order to make their cause known. In all parts of the world interest is now aroused in the work, nor is it possible that England, were the work more widely known, would allow it to stop. But in their efforts to make the Fund national the Committee rely on the co-operation of their friends. If for a few years only these will lend their aid to raise each a small sum, no difficulty will be experienced. Meantime the shafts have to be closed for want of money to buy fresh wood, the workmen have to be reduced in numbers, and Lieutenant Warren is obliged to content himself with one or two excavations at a time. Some of the most interesting explorations—*e.g.*, that of the canals at Bir Eyub, have to be suspended; and this at a time when the most important results are being obtained, and we are apparently on the eve of solving the most interesting problems. The experience of four years has proved that to collect the small sum necessary for this work requires nothing but leaders, and that amount of activity requisite to start a local movement. Moreover, while the donations hitherto received have been chiefly of large amounts, it should not be forgotten that a good deal has been done, and that a great deal more might be done, by enlisting the interest of those who can give but little. And for these as well as for the larger subscribers, the following pages are printed.

June 24, 1869.

LETTER OF MR. EMANUEL DEUTSCH

ON THE CHARACTERS FOUND BY LIEUT. WARREN AT THE S.E. ANGLE OF THE HARAM AREA.

Sir,—During a recent visit to the East I examined, at the instance of the Committee of the Palestine Exploration Fund, all the excavations in progress at Jerusalem. I have further investigated various places

of archæological and antiquarian interest throughout Palestine and Syria, at which researches have already been instituted, or at which it is extremely desirable that they should be instituted, in connection with the objects of your Fund.

There is no particular need for me to recapitulate the results already achieved by the Fund. The reports published by your Committee from time to time dwell with accuracy and minuteness on these points. Suffice it summarily to recall the works at Ophel, Robinson's Arch, Wilson's Arch, the Fountain of the Virgin, and the other spots in the vicinity of the Temple enclosure. This, however, I would beg to emphasize, that all these labours cannot but be regarded as being in their infancy. Underground Jerusalem, such as it discloses itself within these shafts and galleries, driven into the *débris* of thousands of years, presents so wide a field for archæological and topographical research, that if a success really adequate to its prospects is to be achieved, the work ought to be placed on a far more extensive footing You have been very fortunate in the choice of your superintendent, Lieutenant Warren, whose thorough efficiency and iron perseverance are only equalled by his zeal and enthusiasm. But, instead of having to discharge half his already trained workmen, as he had to do during my stay, he should be enabled to engage tenfold assistance. As far as the excavations themselves are concerned, one comfort, if it be a comfort to your Committee, remains; I mean that, with the interest already aroused throughout the world by the doings of the Fund, there can be little doubt that if the work is abandoned owing to the want of support in England, some other nation will take it in hand and carry it out vigorously to the end.

I must now speak somewhat fully on a subject which has engaged public attention for some time, and has already given rise to many conjectures—namely, the "Writings," either painted on, or cut into, the stones, discovered lately on the bottom rows of the wall at the south-east corner of the Haram, at a depth of about 90ft., there where the foundations lie on the live rock itself. I have examined them carefully in their places—by no means an easy task. Neither is the ventilation at that depth favourable to free breathing; nor is the pale glimmer of the taper or the sudden glare of the magnesium wire calculated materially to assist epigraphical studies. To add to the difficulty, some of the characters are partly hidden by the framework, which, let me add by the way, is about to be removed to some other shaft *in order to save expense*, a process whereby the whole of these Graffiti will be buried again, if not totally destroyed.

I have come to the following conclusions:—1, The signs cut or painted were on the stones when they were first laid in their present places; 2, they do not represent any Inscription; 3, they are Phœnician.

I consider them to be partly letters, partly numerals, and partly special masons' or quarry signs. Some of them were recognisable at

once as well-known Phœnician characters; others, hitherto unknown in Phœnician epigraphy, I had the rare satisfaction of being able to identify on absolutely undoubted antique Phœnician structures in Syria; such as the primitive substructures of the harbour at Sidon. No less did I observe them on the "bevelled" stones taken from ancient edifices and built into later work throughout Phœnicia. For a most striking and obvious instance of this I would point to the ruined citadel standing above Saida, the stones of which—old Phœnician stones to wit, immured in their present place at subsequent periods—teem with peculiar marks ("Fantasias") identical with those at Jerusalem. These signs have, to my knowledge, never been noticed before, as, indeed, I was the first to point them out to the very excavator of the famous Ashmunazar Sarcophagus himself—a Syrian gentleman resident at Saida, and well acquainted with all the extant remains. It may not be superfluous to add that, though I found extremely well-preserved painted frescoes in Phœnician tombs, all the stone-marks just alluded to were cut, not painted.

I think all attempts to determine the exact meaning of each and all of these technical signs would, at least at this stage, be premature. If the excavations are properly carried on, I venture to predict the occurrence of similar signs on corresponding rows of the wall—signs which, conjointly with those now discovered, may contain not only a full explanation of their own purport, but also solve perhaps some other vital question regarding the plan of the whole building. It may, however, be well to say a few words regarding my opinion as to the Numerals.

You are aware that the Phœnicians had special numerical signs (figures) which they not rarely added to the number written out in words (see the sacrificial tariffs of Marseilles and the British Museum, the tomb of Ashmunazar in the Louvre, the trilingual inscription on the Sardinian altar, &c.) The basis of this cipher system, probably derived from Babylonia, is the simple stroke. One perpendicular stroke stands for One, two stand for Two, and so on up to Ten. The ten is expressed by a horizontal stroke, either quite straight or curved. Two such strokes placed upon each other form twenty. Of this figure, however, there are many variations, according to the different positions and combinations of the two tens of which it is composed. It either appears as an oval more or less flat, with the ends either open or closed: or something like our own 3; or with the straight strokes placed perpendicularly and joined by a little slanting or horizontal line, as a Latin N or a Greek H, and so forth. A special sign for five had not as yet been found on our scanty Phœnician remains. It occurs, however, very frequently in Palmyrene, the figures of which are undoubtedly taken from the Phœnician, and it occurs among these signs on the wall. It consists of an oblique stroke divided by a smaller stroke—in other words, the ten halved. To give an easy and clear specimen, I would refer to stone B, in course 5, which shows the marks o ⟋ o = 20 5 20. Whether these figures designate cubits or inches,

height or breadth, stones or courses, must be left to the future to decide. It seems superfluous to point out how much not only Phœnikology, but Semitic studies in general, would gain by an increase of similar epigraphical discoveries. Only, they must be preserved intact; since no drawing, however careful, can accurately render epigraphical monuments, and photography has in the present case proved a failure.

I have, in the course of my journey, frequently had occasion to feel grateful for the series of photographs taken under your auspices by Captain Wilson and Lieutenant Warren. Thus, to allude to one fact only; when two years ago I was enabled by one of your photographs fully to decipher the probably oldest Samaritan stone in existence, now immured upside down in the ruined mosque of Nablus, I could not but be surprised at the fact that no investigator, however competent, even among those who had copied the stone on the spot, should have been able to decipher it fully, and without conjectures, before. When on the spot myself I soon perceived that the photograph showed what the stone itself did not show, at least from the position in which the decipherer is necessarily placed; hanging as he does, at some height in the middle of a ruined tower, over an unstable ledge, and straining towards some blurred and indistinct Samaritan letters standing as it were on their heads. In the same way I have found it much easier to read the Hebrew inscription on the lintel of the ruined synagogue at Kefr Birim ("Peace be upon this dwelling-place," &c.) in the photographs than at the place itself. And let me add another rather melancholy advantage these photographs offer; they record what magnificent remains there were in the land two years ago. It was with real pain that I noticed how much of these has since been carried away to be burnt into lime, had been wantonly mutilated, or utterly destroyed, at such places as Kedesh Naphthali, Tel Hum (whence also the remarkable Phœniko-Hebrew stone described by Lady Strangford has disappeared), at Kefr Birim, at Meiron (the traditional burial-place of Shammai and Hillel), &c. Some fine remains brought to light by your expedition seem to have been destroyed the instant the explorers left the spot, so that it might perhaps have been better to leave them in buried safety.

Lieutenant Warren has promised to send home reproductions of inscriptions from Jerusalem, some of which I was fortunate enough to discover—among them one in Hebrew with "ligatures," near the well-known tomb of the Bene-Chezir (misnamed St. James's tomb), in the Valley of Jehoshaphat; another new Hebrew inscription on a column in the double passage underneath the Aksa; a cufic one in the Haram Area, in which I was enabled, through Mr. Warren's influence, to spend a considerable time utterly undisturbed. Accurate reproductions of these and similar remains will form no unworthy additions to our knowledge of the epigraphical monuments of the Holy City.

It would be more than idle at the present stage of the Fund to speak

of an extension of your researches to Phœnicia itself, a country so intimately connected with the history and culture of Palestine. Thus much only I would, from careful personal investigations on the spot, beg to place on record—that the French Expedition of some years back has been far from exhausting the field of research.

I ought not to omit that, in the course of an interview I had with the Pasha of Jerusalem, His Highness repeatedly assured me of the great interest he took in the objects of the Fund, and promised to do the very best in his power to forward the operations.

EMANUEL DEUTSCH.

G. Grove, Esq., Hon. Secretary, Palestine Exploration Fund.

NOTES ON JEWISH SYNAGOGUES IN GALILEE.

BY CAPTAIN C. W. WILSON, R.E.

DURING the late expedition to Palestine, the remains of several undoubted Jewish Synagogues were examined, and it is proposed in the following paper to give some account of their arrangement and construction as shown by the existing ruins. The synagogues visited, nine in number, are situated in the district north of the Sea of Galilee at Nebartein, El Jish, Kefr Birim, Meiron, Um el Amud, Irbid, Tel Hum, and Kerazeh. Some other remains of the same description were said to exist in the hills above Tyre, but that part of the country did not come within the work of the exploring party.

In choosing sites for the synagogues in the different towns, the builders have by no means selected the most prominent positions. That at Nebartein lies below the old town, at Meiron a site has been excavated in the rocky side of the hill, and at Irbid the building is awkwardly situated in the lower part of the town, some distance down the northern slope of the hill, which has been partly cut away for it. Little is left of any of the synagogues. The stone has been carried away for more recent erections, and with the exception of Irbid, Tel Hum, and perhaps Kerazeh, they have not been made use of by the races who have occupied Palestine in later times. Those at Tel Hum and Kerazeh have possibly been turned into churches; that at Irbid, where the door is on the eastern side, has been used as a mosque. The entrances of the others being at their southern ends, which would have obliged a Moslem on entering to turn his back on Mecca, seems to have rendered them unsuitable for this purpose.

The buildings are always rectangular, having the longest dimension in a nearly north and south direction, and the interiors are divided into five aisles by four rows of columns, except in the small snyagogue at Kefr Birim, where there have been only two rows of columns and three aisles. The masonry of the walls is well built and solid, of native lime-

stone; the stones are set without mortar, the beds and joints being "chiselled in" from two to five inches, and the remainder rough picked; the exterior faces are finely dressed, but the backs are left rough, more readily to take the plaster with which the interiors seem to have been covered, and of which some traces remain at Tel Hum. Great attention was paid to the heights of the several courses, in the hope that some clue might be obtained to the length of the cubit or other measure used by the masons; but they proved to be very unequal, no two in the same building being alike.

With the exception of Irbid, where the form of the ground necessitated a different construction, the entrances are at the southern end, an arrangement hardly expected, as every Jew on entering must have turned his back on Jerusalem. The entrances are three in number, one large doorway opening into the centre aisle, and a smaller one on either side; the small synagogue at Kefr Birim has only one entrance. The doorposts have peculiar architrave mouldings, the details of which may be seen in the plans and photographs. Those at Meiron and Kefr Birim are identical, and those at Irbid are of the same character. The doors have all been folding ones with socket hinges, and closed by bars on the inside. In the large synagogue at Kefr Birim, which is used as an Arab house, the modern doors are hung in the old fittings. On the lintels over the doors there is much variety of ornament. At Nebartein is an inscription in Hebrew, and a representation of the seven-branched candlestick, similar to, though of rougher workmanship, than the well-known one on Titus's Arch, and identical with one found in the catacombs at Rome. At the small synagogue at Kefr Birim is another inscription, and some defaced sculpture which evidently represents two animals lying down, one on either side of an open flower, possibly intended for the Paschal Lamb. At the large synagogue at Kefr Birim is a wreath with two lambs defaced in the same manner, and above this a moulding with a well executed scroll of vine leaves with bunches of grapes, and at one end a vase, perhaps the pot of manna. At Kerazeh, Meiron, and Irbid, the architrave mouldings of the doorposts have been carried round the heads of the doors. At Tel Hum, on one lintel is what appears to be the pot of manna, and on either side of it something like a reed, which may possibly be Aaron's rod. The sculpture on the main lintel is too much destroyed to distinguish its subject: on the top, cut in low relief, is a garland held up in several loops, over which is a flower. Above the centre door at Kefr Birim, there is a semicircular relieving arch, with several mouldings carried round its face. It is the only instance in which a doorway remains entire; but the others, judging from a curious slab found at Tel Hum, were in the same style, and it seems probable that the ornamented blocks uncovered at Kerazeh were situated immediately over the lintels of the doors in place of such arches.

At Kefr Birim there is a sort of porch with a sunk court in front of the entrance, and there appears to have been a similar one at Meiron.

In the former synagogue, above the plain face of the enclosing wall, runs a small projecting moulding, corresponding in height and position with the abacus of the capitals of the porch; and as fragments identical in character were found at Tel Hum, Irbid, and Meiron, it seems to have been used in all the buildings. Above this moulding is an architrave of which there are also remains at Tel Hum and Meiron. It cannot be certainly determined what was above the architrave. At Tel Hum and Um el Amud a number of slabs with different floral ornaments were found, which appeared to have formed part of a frieze, and at the former several portions of a heavy cornice of peculiar shape, which may have run above the frieze; but the style of decoration of this synagogue is so different in most respects from that of the others that it would hardly be fair to take it as a general example; and no fragments of cornice were seen at any other place.

The floors of the synagogues are paved with slabs of white limestone. The arrangement of the columns is the same in all. The intercolumnar distances are excessively small; but whether this arose from want of constructive skill or an attempt to assimilate the buildings to something of the same kind in the Temple at Jerusalem, is difficult to say. There is one striking peculiarity to be noticed, that the two corner columns at the northern end invariably have their two exterior faces square like pillars, and the two interior ones formed by half-engaged columns.

The capitals are various. At Tel Hum and Kerazeh they are Corinthian, and the fillet round the neck has a pretty rope moulding. On the Tel Hum slab Ionic only are shown; at Irbid there are Corinthian and Ionic; and at El Jish, Kefr Birim, Meiron, Um el Amud, and Irbid, a peculiar description of capital, which seems to be of pure Jewish growth. At Tel Hum and Meiron a number of blocks of stone were found which evidently went from column to column, and received the rafters of the roof. Their faces have architrave mouldings, and the soffit is also ornamented; the rafters, judging by the spaces left for them, 8¼in. deep by 2ft. wide, were of large size; but this would be necessary if the roof were flat and covered with earth. It may be objected that there is no large timber near; but the description given by Josephus of the fleets on the Lake shows that in his day there was no difficulty in procuring a good supply. This flat roof, with thick earthen cover, which seems also to have been adopted for the private houses at Kerazeh and other places in Palestine, is perhaps one reason for the closeness with which the columns are placed to each other. It is still used for nearly all modern Arab houses, and is the best adapted for keeping out the intense heat of the sun.

In the front of the large synagogue at Kefr Birim there are two small windows for lighting the interior; but whether there were others at the sides, and whether this was the usual mode of admitting light, there are not sufficient remains to show. A table is given at the end showing the interior dimensions, intercolumnar distances, heights of

columns, &c., in the different synagogues, for the sake of convenient comparison.

Nebartein.—Of this synagogue a portion of the western and southern walls and four pedestals remain *in situ*. Probably the surrounding wall might be traced by excavation, but men would have to be brought from a distance to do this. There are several shafts of columns, but no capitals. The lintel with the inscription lies half buried a few yards from the southern end.

El Jish.—There are here only fragments of columns, lintels, capitals, &c., built into the walls of the vineyards and houses; they are readily recognised as portions of a synagogue from the character of the mouldings and the presence of the peculiar pedestals of the corner columns of the northern end.

Large Synagogue, Kefr Birim.—This is the most perfect remain of the kind in Palestine. The southern face, with its three doors, though much shaken, is nearly entire. There is part of a porch, and by a small excavation the course of the surrounding wall was traced. Two of the columns at the northern end are *in situ*. The court in front of the entrance is sunk 15in. below the ground line, and is reached by three broad steps.

Small Synagogue, Kefr Birim.—The doorposts and lintel, on which is the Hebrew inscription, are still standing, and there are two pedestals *in situ*. By excavation the foundations of the main walls were uncovered. This building appears to have had only two rows of columns and one door. In the interior are remains of pedestals, columns, and capitals.

Meiron.—The site for this synagogue has been excavated in the eastern slope of Jebel Jurmuk, so that the western side and the floor are of solid rock. On the floor can be traced the position of the lines of columns by the raised step left to receive the pedestals. The centre door and one of the side ones are almost perfect. The mouldings on them are identical with those at Kefr Birim.

Um el Amud.—Here there is only one of the corner columns of the northern end *in situ* and part of the wall. Many fragments of a kind of frieze similar to those at Tel Hum were found, and a lintel on which are two rudely carved lions, but it is doubtful whether this formed part of the synagogue.

Irbid, 'Arabela.'—This building is on the right bank of Wady Hammam, on the side of the hill which slopes steeply down towards the north. The ground has been cut away to receive it, and as this prevented the construction of an entrance at the southern end in the usual way, it was placed in the eastern side, where portions of two doorways remain. The floor is sunk below the level of the ground, and is reached by a descent of three steps, two of which are continued round the northern end forming benches or seats. Several pedestals are *in situ*. This building has been at one time used as a mosque, the mihrab of which is perfect, and perhaps also as a church, if one may judge from the varied

style of the capitals, Ionic, Corinthian, and others of a very much later period being mixed up amidst the ruins in inextricable confusion.

Tel Hum, 'Capernaum.'—The whole of the surrounding wall of this synagogue was uncovered, and a number of pedestals were found *in situ*. It appears to have been rather better finished than the others, and to have been ornamented much more profusely. The capitals are of the Corinthian order, and there are remains of a heavy cornice and frieze. The exterior was decorated with pilasters, the only instance met with in this class of building. On the eastern side is a later addition, the walls of which have disappeared down to the plinth course. It consists of a rectangular building, having three entrances on the north side and one on the east, and the exterior was ornamented with pilasters similar to those on the synagogue. There is no doorway connecting the two buildings, and the walls meet with a straight joint, those of the later addition abutting on and hiding the corner pilasters of the original construction. During the excavations a portion of a curious slab was found, on which is represented the face of some large building, possibly a synagogue. The front, as here shown, has ten columns or pilasters with Ionic capitals set on a plinth course. Two of the pilasters form the jambs of the door, which has a circular head and ornament like those found entire at Kerazeh, and in fragments at Irbid and Tel Hum. The door is slightly open and is panelled. The entablature, which runs above the columns, is carried round the arch of the door. Mixed with the *débris* were found several remains of a much later date, which may have been added if the synagogue was ever used as a church. There are no traces of a mihrab or of its ever having been turned into a mosque.

Kerazeh, 'Chorazin.'—There is little left here except two pedestals *in situ*, a portion of the wall and fragments of capitals, &c., with some well-cut circular inches which appear to have gone over the doors. The remains of the building are entirely of black basalt of great hardness, and the labour of cutting the finely chiselled capitals and niches in this must have been extreme.

C. W. Wilson, Capt. R.E.

Note.—The peculiar construction of the Synagogues, and the inscriptions found in them, are shown in the series of Photographs taken for the Palestine Exploration Fund.

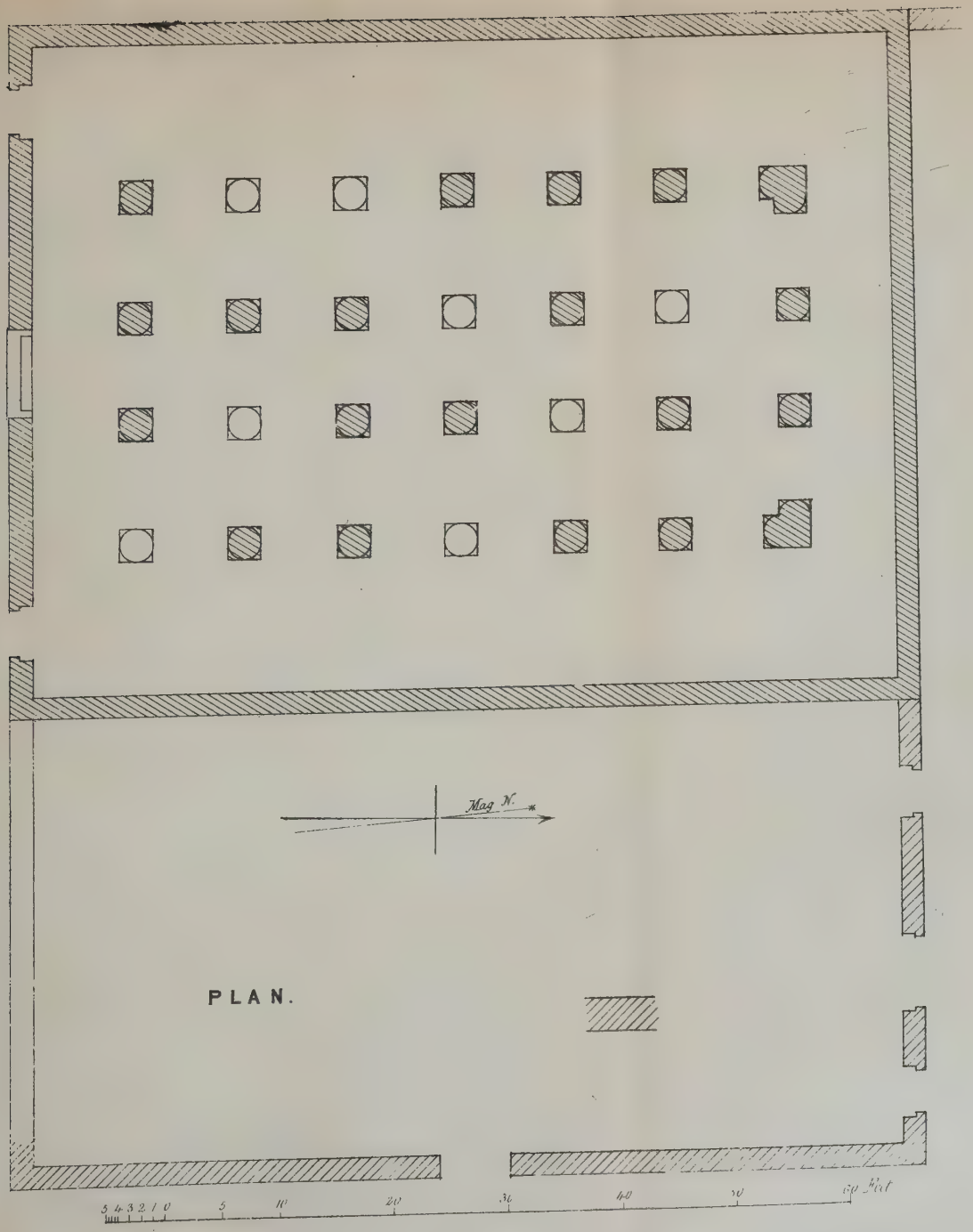
DIMENSIONS OF SYNAGOGUES IN GALILEE.

	Nebartein.	El Jish.	Large Synagogue, Kefr Birim.	Small Synagogue Kefr Birim.	Meiron.	Um el Amud.	Irbid.	Tel Hum.	Kerazeh.
	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Ft. in.
Interior length	Not known	Not known	60 6	48 6	90 0	Not known	57 3	74 9	74 6
Interior breadth.....	Not known	Not known	46 6	35 6	44 8	Not known	53 0	56 9	49 0
Thickness of wall ...	2 0	Not known	2 0	2 9	2 8	Not known	7 2	1 11	4 0
Intercolumnar distances	7 6	Not known	6 1	6 1	Not known	Not known	8 0	7 3	9 6
Height of pedestal with base of column	2 4	Not known	2 $6\frac{1}{4}$	2 $8\frac{1}{2}$	2 6	2 1	1 $2\frac{1}{4}$	3 $3\frac{3}{4}$	3 $3\frac{3}{4}$
Height of shaft	Not known	Not known	11 $9\frac{3}{4}$	9 $7\frac{1}{2}$	Not known	11 6	10 6	Not known	Not known
Height of capital with Abacus	Not known	Not known	1 5	1 $3\frac{1}{4}$	1 5	1 0	Various	2 5	2 3
Height of Architrave	Not known	1 $8\frac{1}{3}$	2 $4\frac{1}{4}$	Not known	2 4	Not known	Not known	3 $0\frac{1}{4}$	Not known
Lower diameter of column	2 2	1 4	2 $2\frac{1}{2}$	2 1	2 $2\frac{1}{2}$	2 $2\frac{1}{2}$	2 1	2 4	2 0
Upper diameter of column	Not known	Not known	2 3	2 0	2 0	Not known	1 10	2 0	1 10

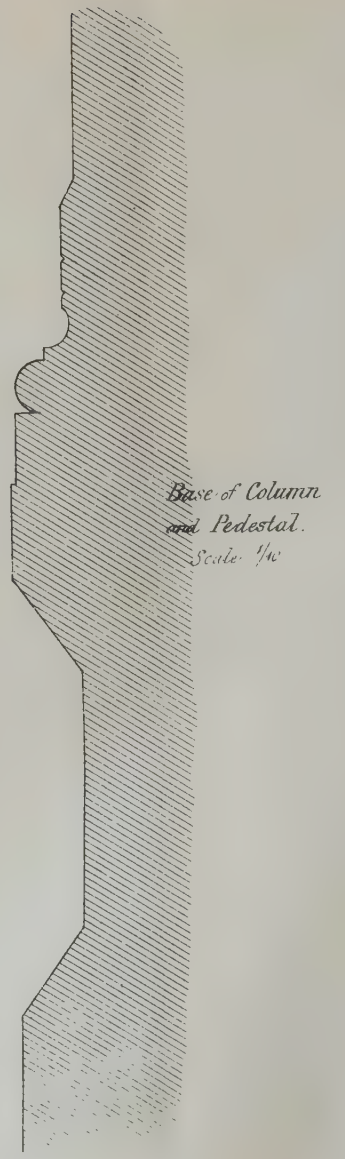
Palestine Explor

Plan and Details of Synago

described in Capt. Wilson's Pape



The existing remains are shaded
Original Synagogue



Base of Column and Pedestal.
Scale 1/10

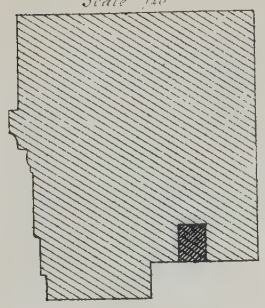
Section

Fund.

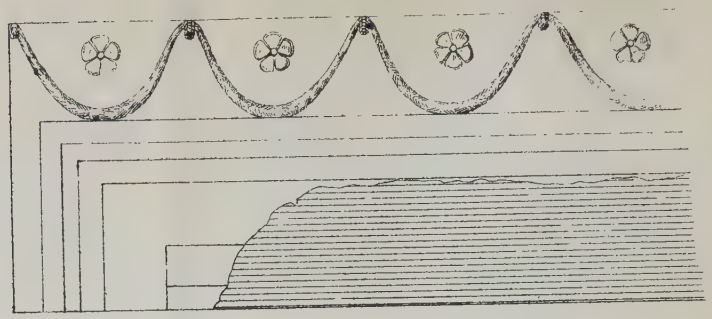
at Tel Hum, (Capernaum)

the Synagogues of Galilee.

Section through lintel over main gateway.
Scale 1/20

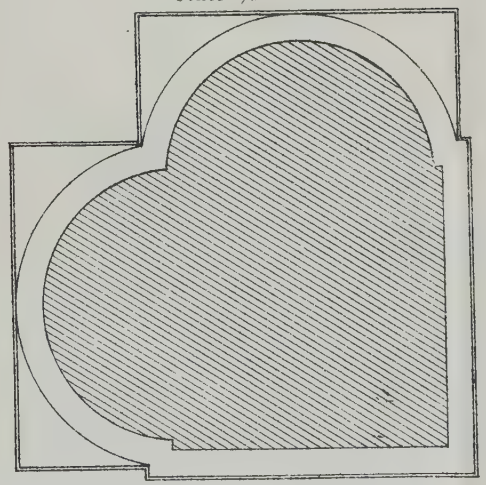


Elevation of lintel over main gateway. Scale 1/2[illegible]

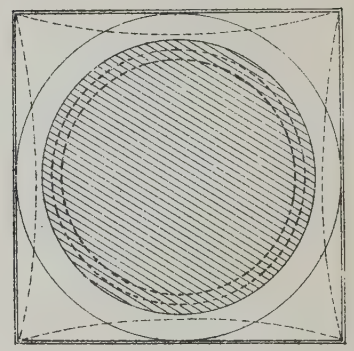


chitrave. Scale 1/10.

Plan of Column at north end.
Scale 1/20.



Plan of single Column.
Scale 1/20



EXCAVATION OF THE TELL SALAHIYEH.

BY E. T. ROGERS, ESQ., LATE H.B.M. CONSUL AT DAMASCUS.

THE Tell Salahiyeh is a large artificial mound situated about eight miles to the East of Damascus, on the north bank of the river Barada. The letters from which these extracts are taken were written in May and June, 1866. As the results of this investigation have never yet been made public, the opportunity afforded by the Quarterly Statement is taken to publish Mr. Rogers's account:—

"Early in the morning of May 17th, I rode over to the Tell, and, having sent out ten workmen the night before, I made them go to work on the cutting begun by Captain Wilson, on the north-west of the mound. During the day some large basaltic and lime stones were found, as if forming the courses of the wall of some building. I therefore directed a rectangular cutting to be made, to follow up the course of the stones. More stones were found, as well as a few small pieces of white marble, some pottery, some bricks of about one foot square and four inches thick, some charcoal and burnt earth.

"May 18.—The work was continued by half the men at the first cutting, while the other half were sent to deepen the cutting opened by Captain Wilson in the north-end corner.

"May 19.—As the latter cutting did not seem likely to reveal anything, a similar cutting—which I will call C—was made a little to the west of it. I thought this spur looked more promising. At the depth of a very few feet, mortar, large bricks, charred wood, and pottery were found. I directed the workmen to deepen the cutting, but not at present to widen it more than necessary. At the first cutting some more stones were found, some bones, the tusk of a wild boar, and a few more pieces of marble or pottery. The burrows of foxes traversed the cuttings in several places, so that the bones we found may possibly have been deposited by wild animals. Here, also, I directed the men to deepen the cutting. This morning I have sent out some more workmen, with better pickaxes and spades, and have directed them to deepen the cuttings already commenced, including the well, so that I hope by next mail to be able to give you some more satisfactory account of the progress.

"May 31.—Since writing on the 21st, I have had twenty-four men at work on the Tell, and have visited the place to give directions and see the progress every second day.

"I have deepened the first cutting to 24ft., and found a continuation of the bricks and a few stones here and there, and not even a perfect regularity in the position of the bricks and mortar.

"In the second cutting were a few bricks and mortar, but natural earth at the depth of about 5ft.

"Cutting C has been cut down to 22ft. At 10ft. a thick cement of lime and pebbles was found; beneath it some charred wood, under

which were alternate layers of sun-dried and baked bricks, with mortar between; but at 22ft. deep I still found nothing but solid brickwork, and came to no pavement of any kind. Pieces of pottery were found and a few pieces of limestone and basalt.

"The cutting at the well was sunk to 14ft.; bricks of two kinds were found in regular layers.

"In a fourth cutting, south of this, at the depth of 6ft. or 8ft., some flat dishes or *tazzes*, some round and some square, on three or four feet, cut in black stone, were found. One of them, about six inches in diameter, is very beautifully cut and smoothed, with three feet and a centre prop broken. Some pieces of larger square ones and of one larger round one were also found; also the foot of a broken glass of that exquisite sea-green which is only seen in ancient glass, and partly encrusted with the oxide which is seen on glass which has been buried for many years. This cutting was taken down to a depth of 18ft., and still regular layers of bricks, stones of various shapes, such as small truncated cones, that would seem to have been made for pounding or grinding powder on a slab; other black stones, like the shape of split sugar-loaves; a few pieces of mica or talc, then another piece of glass, but nothing perfect.

"Close to this cutting, and to the east of it, I made another, in which were found much broken pottery, black inside and red on the surface. A few stones, similar to those already mentioned, with bricks, mortar, and thick strong cement, were found. It was opened to the depth of 32ft.

"Yesterday, when at the works, I caused another opening to be made at the south of the mound, where the regular layers of bricks are very distinct and perfect. These bricks are about 18in. square and 4in. thick; some pale yellow, others pale red, joined by strong mortar; and I am in hope that we may be enabled to discover some clue to this wonderful work, as, after digging for a few hours, some stones of a heart shape were found, as if belonging to a pavement.

"The people in the neighbourhood came to me and said that if I wanted to make any discoveries, I must first propitiate the Sheikh, whose tomb is on the top of the Tell, by sacrificing a sheep in his honour. I immediately gave them half a sovereign with which to purchase the victim, and my workmen partook of the feast. I consented to the proposal rather to encourage the men, and it has had a good effect.

"It is early in the work to form any conjecture; but it seems to me that the Tell is a solid mass of brickwork built over, perhaps, one chamber or more in the centre, similar to the Pyramids of Egypt; for wherever I dig, I find layers of bricks and mortar. If the Tell were the mere store of a brick factory, there would be no mortar between the layers."

The work, affording no promise of further discovery, was then abandoned.

METEOROLOGICAL OBSERVATIONS.

Results of Observations taken at the village of Olieh, Mount Lebanon, during the summer of 1868, with two Aneroid barometers and wet and dry bulb Thermometers (Negretti and Zambra No. 2242), height above sea level about 2,700 feet.

By G. J. Eldridge, Esq., Consul-General of Syria.

From July 11th. Barometers. 76 Observations.

	Highest.	Lowest.	Average.	Grtst. diff.	Least diff.	Aver. diff.	
No. 1.	27·13	26·92	27·036	·10	·02		Winds S.W. and calm. Occasionally cloudy and hazy.
No. 2.	27·20	26·95	27·089				

Thermometers. 76 Observations.

Dry	79·50	64	70·78	10°	1·5	4·38	
Wet	71·50	60	66·08				

August. Barometers. 95 Observations.

No. 1.	27·78	26·96	27·066	·16	·02		Winds, &c., same as last month.
No. 2.	27·30	27·05	27·158				

Thermometers. 95 Observations.

Dry	82·75	66·	77·71	15°	1°	4°	Showers on 13th and 19th.
Wet	76·50	63·	68·01				

September. Barometers. 94 Observations.

No. 1.	27·24	27·08	27·154	.07	.00		Winds &c., same as last month.
No. 2.	27·28	27·11	27·195				

Thermometers. 94 Observations.

Dry	80·75	63·50	70·53	15°	0°	3·70	Rain between 18th and 21st.
Wet	73·25	61·	66·68				

October, till 27th. Barometers. 84 Observations.

No. 1.	27·34	27·12	27 22	·08	·02	·045	Winds E. N. & calm, clear and very dry atmosphere.
No. 2.	27·40	27·15	27·26				

Thermometers. 84 Observations.

Dry	78·50	68	74·8	15°	1°	7·58	
Wet	73·	58	63 66				

The Observations were usually taken four times a day, viz.—between 8 and 9 A.M.; at noon; between 5 and 6 P.M.; and between 10 and 11 P.M. They were, however, sometimes unavoidably neglected owing to absence from home, &c.

Beyrout, Nov. 20th, 1868. G. Jackson Eldridge.

ROBINSON'S ARCH.

BY W. SIMPSON, ESQ.

THE excavation at Robinson's Arch has led to what is perhaps one of the most picturesque points of "underground Jerusalem." A bridge is always attractive to an artist, but a bridge in ruins is doubly so. In the present case we find that *a bridge buried in ruins* is not less attractive, that it is a good subject for the pencil, and its position, where it has been entombed for ages, endows it with an interest which it is difficult to convey in words. The three courses seen above ground, and forming part of the Haram Wall, had been the subject of many theories. Dr. Robinson's first and most natural conclusion, that it had been a bridge, was doubted by some of the highest authorities upon the topography of Jerusalem. But when Mr. Warren sunk a shaft at this place and came upon the pier which supported the other end of the Arch, every doubt was set at rest. A fact was attained and a point settled.

In descending this shaft the visitor first reaches the base of the pier. It is formed of the same kind of stones as older parts of the Haram Wall, the "bevelled draught" is on them, and some are very large. This, with the fact that the pier is founded on the rock, would indicate that they belong to the same date, and are part of the original design of the wall. That there need be no doubt about the pre-existence of the arch above, you are shown the voussoirs, or bevelled stones of it, still lying where they fell, on what would be the level of the ground at the time. They are in a confused heap, and one has to wriggle through these large blocks like a weasel, and then there is a farther descent of about 20ft. and a new feature is discovered. You find yourself in an arched passage. It is both high and wide. You could not drive a cab through it, but one could easily pass riding on a donkey. It runs north and south along the course of the Tyropœon Valley. At a short distance to the north it contracts in size, so much so that a man must crawl to enter. Although arched with stones, the sides are cut out of the solid rock, so that here we are clearly below the most ancient surface of the ground, but not far, as the arch overhead indicates. To the south the arch ceases, and you enter an expansion of the passage. This is choked up with earth, but a square hole in the roof clearly tells its purpose. That hole was for drawing water, and the spot is a cistern. This also conveys a point of importance; the passage was not a sewer, but a conduit for pure water. And another important point is also reached, that when the ground was 60ft. below its present surface, at some former period long gone by, the people of Jerusalem dipped their vessels through that square opening into this well of running water. Imagination has to stop at the date of Solomon as the time when the temple, the Haram Wall, and the bridge were built; but this cistern may have existed ages before that time. Scandals whispered at the mouth of this well may have echoed round its rocky sides as far back as the time when the Jebusites and Canaanites ruled in the land. But

a cistern or cave with no constructive character about it, no ornament, not even the mark of a tool left, leaves small material to guide any one to its probable age. It might have been but of yesterday, did not the mass of *débris* above preclude the idea. And another evidence of its antiquity will be given.

Through the arched roof of the rock-cut passage two of the voussoirs have penetrated in their fall. These stones are very large, and must have descended with an immense force. Only one corner of these voussoirs is visible, where they have forced themselves down through the arch, and they now rest supported by the wall of solid rock on each side. These voussoirs, by their position, prove that the rock-cut passage and its arched roof had been in existence at the time when the destruction of Robinson's Arch occurred. As to when that took place, we have as yet no data by which to judge, but it could not have been of yesterday. The 60ft. of rubbish overhead is a clear proof of that. The roof of the conduit must have been very near the surface when the bridge fell, for a very few feet of earth would have deadened the fall, and prevented the very picturesque result which we now see so far below the surface.

It would be of the highest importance if the date of the building or of the destruction of any one of these places could be determined. As yet we can only come to conclusions as to the relative age of each part from the indications of their position, and we can only hope that Mr. Warren will in his diggings stumble upon something that may give us this most important key-note. It would be vain to speculate on the time necessary for 60ft. of rubbish to accumulate; we can only conclude, when we see the surface with corn-fields upon it, a forest of prickly pears and old houses, and massive walls with towers built since the accumulation took place—and these walls and towers now in ruins—that we have a very long period of time to deal with. It would be equally vain to speculate on the destruction of this magnificent bridge; the stones do not seem to have decayed, and this prevents the mind from supposing that it had become a ruin before it fell. Was it an enemy destroying the walls, or an effort of defence breaking down the approaches? Before the days of gunpowder the destruction of such an arch would be difficult. An earthquake would be the easiest explanation, and Josephus does chronicle a very severe one in *Antiq.* xv. ch. v. § 2.

Mr. Warren describes a second fall of voussoirs, which now lie upon a pavement formed upon *débris*, and 20ft. above the top of the conduit below. This would imply that the arch had remained broken while the 20ft. of *débris* was forming. Mr. Warren also describes houses as having been built on the level of this pavement, and their destruction helped to supply the rubbish which now fills up the place.

That this corner is one of the most ancient parts of the Haram Wall no one doubts. The immense stones still remaining in it are considered to be a clear evidence of this. The spring of the arch is 38ft. from the

south-west corner, and there is one stone stretches along the whole of this space. The second course of the spring of Robinson's Arch is usually represented as being formed of two stones, but I was inclined to the idea that it was only one. What seems the junction of the two may be only a crack which has increased by the decay of the stone. If they are two stones, one thing is clear, they were one stone in the quarry; for the same stratification passes along from the one to the other. If this should be found to be only one stone, it will be one of the largest in the whole Haram Wall.

It is not so generally known that there is the spring of another arch still visible in the Haram Wall: all that is to be seen is one course formed of two stones. This is at the south-east corner. As it is about the same distance north from the corner as Robinson's Arch, it follows that if a road or pathway went direct from one of these that it would lead straight to the other. This would indicate a symmetry in the design of the two bridges; but as this second bridge would lead across the Kedron to a point not far from Absolom's pillar, one asks, "For what purpose could such a work be constructed?" The width of the valley is great, and the depth would be still more giddy than the walls as described by Josephus. The spring course would indicate a narrower bridge than that at the south-west corner, and it puzzles one to explain for what purpose such slight structure could be for. None but a nation of Blondins could have used it as a bridge. The only explanation yet given is, that it was for the scapegoat to pass over on its way to the Dead Sea and the desert. If this is not the true theory, the only other thing that one can suggest is, that it was an aqueduct, by which the waters from the temple could "issue out towards the east country, and go down into the desert, and go into the sea" (Ezek. xlvii. 8). Still there is a possibility that it may have been only a balcony or a stair. It was the stairs leading up unto the house of the Lord that so affected the Queen of Sheba, and as yet no remains of these have been found. We cannot expect everything to be cleared up at once. The Explorations have already done good work, and there is more in store for them to do.

From the

REPORT OF THE EXECUTIVE COMMITTEE TO THE GENERAL COMMITTEE, AT THE MEETING OF THE 4th MAY, 1869.

The Executive Committee desire to express their very strong sense of the activity, intelligence, and ability displayed by Lieutenant Warren in the conduct of the works at Jerusalem. It would be difficult to find a man more qualified for the prosecution of such works, requiring as they do, great tact, judgment as to the most likely spots for excavation, and the most unwearying personal activity and courage. He has now

been in Jerusalem for a period of two years and a half. His staff at first consisted only of Sergeant Birtles; it was then increased by the addition of Corporals Duncan and Hanson, and afterwards by that of Corporals Ellis, Cock, Mackenzie, and Turner. Of these Sergeant Birtles was invalided home in the spring of last year, but on recovery went out again. Of him Lieutenant Warren speaks in the highest terms. Corporal Duncan unfortunately died in August, 1868. Hanson was sent home by Lieutenant Warren; Turner was invalided home. There remain now, therefore, Sergeant Birtles and Corporals Ellis, Cock, and Mackenzie.

Leave was granted by the War Office in March, 1868, to draw stores from Malta, which has been found of great service.

Lieutenant Warren's original instructions were to excavate as close to the Haram Wall as possible. Permission was, however, granted him in April, 1868, to dig elsewhere if he thought proper, a permission of which he has availed himself to work at Bir Eyub, the Virgin's Fountain, and the Muristan.

It is not necessary for the Report of the Executive Committee to contain any account in detail of Warren's work. This will be found in his letters and in the published "Statements of Progress." The Executive Committee, therefore, only call the attention of the General Committee to the main points of interest. These are Robinson's Arch, with its aqueducts, circular pools, and subterranean canal; Wilson's Arch, with its chambers and passages; the discoveries in the Haram Area itself, in the Birket Israel, at the south wall, on the Hill of Ophel, and, above all, at the south-east angle, where the letters have been found.

It may be thought due to their successors that the Executive Committee should add a few words with regard to the future—as to the plan on which the Society should proceed, and the objects it should seek to attain.

It may be assumed that a large majority of our subscribers would agree in regarding Jerusalem itself as the special object to which we should direct our attention so long as important points in determining its topography are left obscure, and so long as circumstances render systematic excavation possible. And having conclusively shown that the work of excavation at Jerusalem can be carried on, when intelligently directed, without arousing opposition—which until the arrival of Captain Wilson in Jerusalem in 1864, had made many despair of the practicability of the work undertaken by our Society—it would be most imprudent to relinquish the ground we now occupy, so long as funds are forthcoming to enable us to keep our party together, and there remains work for them to do. Some other party might step in and rob our Society of the fruits of our long toils in the past.

The two principal points of interest are the site of the Holy Sepulchre and of the Jewish Temple. It is not the duty of the Executive Committee to point out the bearing on this latter point of Mr. Warren's discoveries in the neighbourhood of the Haram, but none will depreciate

their importance. Mr. Warren's work will not require to be done again—it is a κτῆμα ἐς ἀεί. But it has served to bring out into even stronger relief the supreme importance of excavations within the Haram enclosure itself. Our past work has shown that certainty as to the extent northwards and eastwards of Herod's Temple, and as to the site of the Castle of Antonia, cannot be attained to by excavations on the outside of the Haram alone. Much has already been done by Captain Wilson and Mr. Warren; by Dr. Barclay, Messrs. Catherwood, Arundel, and others, in determining the character of the ground and of the remains within the Haram, both above and below the present surface; but it is only necessary to refer to the literature of the subject, deducing from the same premises widely different conclusions, to show that the information now accessible to us is very incomplete. The fortunate accident of the falling in of the roof of an old vault in heavy rain, and the yet more fortunate circumstance of there being a person at hand competent to turn the accident to the best account, has pointed out one part of the ground where further exploration promises most important results.

There are other points within the Haram Area itself; the reputed passage, for instance, under the cave of the Kubbet Es Sakhra, and the character of the substructures of the Mosque El Aksa and its appurtenances on either side of the double passage. Here Mr. Warren's addition to M. de Saulcy's discoveries in the fact that the double passage has cut through, and is therefore later than, other works, only serves to whet our curiosity as to the extent and character of that former work, and as to its author.

It would be interesting to ascertain whether Mr. Warren's conjecture as to the existence of a lower tier of vaults under the well-known vaults at the south-east angle of the Haram be correct.

The substructions of the Mosque El Burak require more detailed examination than Captain Wilson was able to give them.

It would be most interesting to trace out the extent of the scarped rock which shows itself at the Serai, at the north-west angle of the Haram, and the continuation of the double souterrain under the Via Dolorosa. Excavations about the Golden Gateway would probably verify or disprove Mr. Fergusson's conjecture as to its object and character. There remains much to be done along the west side of the Haram, especially north of Wilson's Arch, where the stream of running water was found but not traced. The covered aqueduct found at Robinson's Arch has also to be traced north and south. It would be interesting to complete the investigations into the character of the buried part of the wall, and to endeavour to test the value of the conjecture which has been advanced, that somewhere in the face of the Kedron Valley, deep buried in the *débris*, is to be found the tomb of David, of Solomon, and the tombs of the Kings of Judah.

On the south, the Hill of Ophel, which has yielded such great results, has not yet been exhausted; and it would be useful to trace the Valley

of Tyropœon, in the line pointed out by Lieutenant Warren, to its junction with the Kedron. Turning to the Western Hill, it would no doubt be possible to recover the exact line of the ancient wall along the brow of the Valley of Hinnom, and there is much ground unoccupied by houses between the brow and the wall of the modern city.

Interesting discoveries might, no doubt, be made as to the general line of the first wall of Josephus here; and as regards the remainder of the ground, it would not be advisable to dig at random on the mere chance of coming on objects of interest. If possible, it would be important to ascertain the character of the substructures of the "Cœnaculum."

Proceeding northwards, the most promising point seems to be the curious subterranean arched passage leading from Wilson's Arch in the direction of the Jaffa Gate. If followed out along its course, it might bring us to the three famous towers of Herod, Hippicus, Pharelus, and Marianone, whose site is generally looked for in this direction.

This seems the most probable means of recovering a starting-point, and consequently the course of the second wall of Josephus. This part of the city is so encumbered with buildings that systematic excavation appears impracticable. We can only hope that some lucky accident will put us on the true scent, and that there may be persons on the spot ready to follow up the scent at once. The only open space, viz., the Muristan, in this part of the city, has been already explored by Mr. Warren, and the result seems to be almost conclusive that the second wall cannot have passed through it.

North of the city walls, notwithstanding the great facilities offered to every inquirer, we are yet in want of a thoroughly complete and trustworthy examination to determine, once for all, whether the ancient city ever did extend beyond the line of the present northern wall. And, finally, there is the curious system of rock-hewn water passages in the Kedron Valley below the Bîr Eyub, discovered by Lieutenant Warren, which still have to be traced to their commencement, when funds are available for this purpose.

Beyond Jerusalem itself our work may be said to have been only begun. The Executive Committee desire much to extend the operations of the fund to the other objects set forth in the original prospectus if they can see their way to doing so without interfering with the progress of the works at Jerusalem.

A plan has been laid before them for continuing the work which has been commenced by the Sinai Survey Fund, and completing the map of Palestine. It is proposed, if the sanction of the government can be obtained, to place the survey (as has been done in Sinai) under the superintendence of the Director-General of the Ordnance Survey, the Palestine Exploration Fund undertaking to raise the necessary funds. By this means the cost of the survey would be very much diminished, and the report and plans published free of all expense to the Fund. The Executive Committee now have this proposal under their consideration

Some progress has been made in collecting materials for a complete map of the country, but we are advised that in order to complete the work thus begun, we ought to provide ourselves with a sufficient sum to enable us to push the work to a conclusion at one effort. Desultory efforts by weak parties appear to be the most expensive in the end. Then there are the other great cities, Jezreel, Samaria, Hebron, Masada, Gaza, Askelon, Kadesh-Naphtali, and round the Lake of Tiberias, Bethshan, and Nazareth; and to examine and excavate the site of Jericho, to determine which has hitherto eluded Mr. Warren's efforts. We have been unable as yet to undertake the investigation of the geology of the country, and so the money entrusted to us for that purpose, together with that for the purposes of the museum, remains on deposit still. The contributions to the Flora and Fauna of the country by Dr. Tristram and others remains yet to be supplemented, and much may be done in meteorology.

In conclusion, the Executive Committee are of opinion that the time has come when it will be desirable that the General Committee of the Society should consider what should be their future policy. It will probably be agreed that no interruption should take place in Mr. Warren's present work at Jerusalem; that the party should be retained there, at least until the setting in of the hot weather. And the Executive Committee would advise that, as heretofore, Mr. Warren should be requested to confine himself as far as possible to the neighbourhood of the Haram itself, to avail himself of every possible opportunity of examining the interior of the Haram, and of any promising opportunity which chance may offer in any other part of the city; that he should be requested to report on the advisability of excavations made to the north of the city, and what probability there may be of our being able to work anywhere near the Church of the Holy Sepulchre, and north of Wilson's Arch. It will be for the General Committee to determine whether after the setting in of the hot season, and supposing the liberal support of the public to be continued, we should still pursue our investigation at Jerusalem, or turn our attention to other perhaps not less important work.

The thanks of the Society are especially due to Dr. Chaplin, who has given his gratuitous attendance to the members of our exploring party during the whole period of their sojourn at Jerusalem. This has been no sinecure office, as is proved by the loss we have sustained by illness. Dr. Chaplin also took charge of the excavations during Mr. Warren's absence in England, in the summer of 1868, and has at all times been ready to afford all possible help to our work.

The Committee desire also to express their obligations to Mr. Eldridge, the British Consul-General at Beyrout, who has kindly undertaken the meteorological observations at that station, which he is conducting with great care and efficiency.

LOCAL ASSOCIATIONS.

The following is a list of local associations now in operation :—

Bath : *Hon. Sec.*—Rev. T. P. Methuen.
Birmingham: *Hon. Sec.*—Rev. Charles Evans.
Cambridge: *Hon. Sec.* — Rev. T. G. Bonney, Tutor of St. John's College.
Chester : *Hon. Sec.*—The Very Rev. the Dean of Chester.
Clifton and Bristol : *Hon. Sec.*—Rev. C. H. Wallace.
Dalkeith : *Hon. Sec.*—W. Bryce, Esq., M.D.
Dover : *Hon. Sec.*—Rev. W. Light.
Dundee : *Hon. Sec.*—R. Mackenzie, Esq.
Edinburgh : *Hon. Sec.*—Rev. W. Lindsay Alexander, D.D., and A. Keith Johnstone, Esq., LL.D.
Falmouth, for the County of Cornwall : *Hon. Sec.*—A. Lloyd Fox, Esq.
Frome : *Hon. Sec.*—Rev. T. G. Rooke.
Glasgow : *Hon. Sec.*—A. B. M'Grigor, Esq.
Greenock : *Hon. Sec.*—D. MacDonald, Esq.
Hertford : *Hon. Sec.*—Rev. T. Lingley.
Liverpool : *Hon. Sec.*—Rev. C. D. Ginsburg.
Malvern : *Hon. Sec.*—Rev. G. Fiske.
Manchester : *Hon. Sec.*—Rev. W. Crane.
Middlesborough : *Hon. Sec.*—Rev. Vyvyan H. Moyle.
Northampton : *Hon. Sec.* —E. F. Law, Esq.
Nottingham : *Hon. Sec. pro tem.*—Rev. F. Morse.
Newcastle : *Hon. Sec.*—Thomas Hodgkin, Esq.
Oxford : *Hon. Sec.*—Rev. Professor Rawlinson.
Perth : *Hon. Sec.*—R. Jameson, Esq.
Plymouth : *Hon. Secs.*—J. B. Rowe, Esq., and J. Shelley, Esq.
Tunbridge Wells : *Hon. Sec.*—Rev. W. Weston Elwes.
Warminster : *Hon. Sec.*—J. Morgan, Esq.

It will be seen that there are yet many important towns unrepresented by auxiliary societies. Friends are earnestly invited to assist in promoting the formation of these. This can be effected most easily by means of a public meeting. The central office will be at all times ready to assist in every possible way. It will be borne in mind that the sum of money required yearly is not large, and that the Committee desire only to secure a sufficient number of small subscribers.

COLLECTING CARDS.

These are prepared for any friends of the Society who may be willing to assist in this way. Ladies who have leisure are specially invited to undertake them. Collectors may inform subscribers that

the Quarterly Reports are published for all. Shilling and half-crown subscriptions are recommended. It is requested that the cards may be returned and exchanged for new ones every three months.

PHOTOGRAPHS.

These are now 349 in number, many of them being of places never before taken. They include, among others, views of the ruins of Tel Hum (Capernaum), Kerazeh (Chorazin), Jerash, (Gerasa), Kedes (Kedesh), and Sebastiyeh (Samaria); many spots in and round Jerusalem, Hebron, Damascus, &c.; and the district of Nablus, Gennesareth, &c.

They are sold, mounted, at 1s. 6d. each to non-subscribers, and to annual subscribers of one guinea or donor of £10, at 1s. each.

The following is a list of the Society's Agents:—

London—Mr. Edward Stanford, 6, Charing-cross; Mr. Jeremiah Smith, 42, Rathbone-place, Oxford-street.
Beccles—Mr. J. F. Pells.
Birmingham—Mr. Henry Wright, Bennett's-hill.
Bolton—Mr. Winstanley.
Brighton—Mr. Attwood; Mr. George Wakeling.
Cambridge—Mr. Metcalfe.
Dover—Mr. Goulden.
Durham—Messrs. Andrews and Co.
Edinburgh—Ordnance Survey Office, 4, St. Andrew's-square.
Glasgow—Mr. David Robertson, St. Vincent-street.
Greenock—Mr. M'Kelvie.
Hastings, St. Leonards—Mr. Dorman.
Lancaster—Mr. Longman.
Leamington—Mr. Knibb.
Liverpool—Mr. Adam Holden, Church-street.
Malvern—Mr. Cross.
Manchester—Mr. Edwin Slater.
Newcastle-on-Tyne—Mr. H. D. Wilson.
Nottingham—Messrs. Dunn and Co.
Norwich—Messrs. Jarrold and Sons.
Oxford—Messrs. Parker.
Settle—Mr. Wildman.
Torquay—Messrs. Way and Sons.
Truro—Mr. Heard.
Worcester—Messrs. Deighton and Sons.
Yarmouth—Mr. Nall.
York—Mr. Sessions.

The Committee will be glad to appoint more agents, and take this opportunity of drawing the attention of their subscribers to the photographs as a means of helping the Society. The photographs are the cheapest series published of the Holy Land. Very many are of places never before taken, and are of great interest. The terms of agency are so arranged that the agent runs no risk whatever beyond the safe custody of the views. It is particularly requested that agents will send in a statement of accounts to the Secretary before December 31 and June 30, for views supplied and sold during the preceding six months. It is also requested that if agents find a delay of more than a fortnight between the despatch of an order and its execution, they will state the facts to the Secretary.

List of photographs may be had on application.

LECTURES.

MEETINGS have been addressed and lectures delivered as follows:—

April 1.—Birmingham, Meeting. Chairman: Lord Lyttelton. Speakers: W. Morrison, Esq., M.P.; Lieut. Anderson, R.E.
,, 1.—Manchester. Chairman: The Bishop of Manchester. The meeting was addressed by the Rev. H. B. Tristram, F.R.S.
,, 7.—Clifton: Rev. H. B. Tristram.
,, 9.—Bath: Rev. H. B. Tristram; W. Morrison, Esq., M.P.
,, 14.—Praed Street Chapel, Paddington: Rev. G. St. Clair.
,, 15.—Mile End Congregational Church: Rev. G. St. Clair.
,, 16.—Hare Court, Canonbury: Rev. G. St. Clair.
,, 20.—Nottingham:
,, 22.—Queen's Road, Dalston: Rev. G. St. Clair.
,, 23.—Upton Chapel, Lambeth: Rev. G. St. Clair.
,, 26.—Middleton Road, Kingsland: Rev. G. St. Clair.
,, 27.—Hampstead Presbyterian Chapel: Rev. G. St Clair.
,, 30.—Tunbridge Wells: Rev. H. B. Tristram.
May 27.—Mornington Church, Hampstead Road: Rev. T. T. Lynch.

It is particularly requested that no *invitations* to give Lectures for the Fund be given to any person not on the Committee, except through the Secretary. No one is authorised at present to use the name of the Society as a lecturer or collector of subscriptions, except the Rev. G. St. Clair; the Rev. Daniel Kerr, of Dunse; Mr. Edward Allon, of Alnwick; all Hon. Secretaries and Members of the General or of Local Committees, and the Secretary. This caution is not of course intended to refer to the gentlemen who kindly give their gratuitous services to the Society.

PUBLICATIONS OF THE SOCIETY.

1. Report of Preliminary Meeting, 1865.
2. Captain Wilson's Expedition, 1866.
3. Meeting at Cambridge, 1867.
4. Annual Meeting, with Lieut. Warren's Report. 1868.
5. Statement of Progress, January 1st, 1869.
6. Lieut. Warren's Letters and Reports, with lithographed plans.
7. Lieut. Warren's Notes on the Valley of the Jordan and Excavations at Ain es Sultan.
8. Dean Stanley's Sermon on the Exploration of Palestine. Price 6d.
9. Quarterly Statement. No. I. April 1st, 1869.
   Contents : Statement by Committee.—Narrative of the Proceedings of the Fund.—"Rob Roy" on the Works.—Lieut. Warren on the Temple of Herod.—Lieut. Warren's Letters (XXXIV. to XXXV.), with two illustrations, &c., &c., &c.
10. Quarterly Statement. No. II. June 24th, 1869.
    Contents : Statement by Committee—Mr. Deutsch on the Letters at the S.E. Angle of the Haram at Jerusalem. — Captain Wilson on the Synagogues of Galilee, with an illustration.—Mr. Rogers's Excavation of Tell Salahîyeh. — Mr. Eldridge's Meteorological Observations on Mount Lebanon.—Mr. Simpson on Robinson's Arch.—The last Report of the Executive Committee.—Lieutenant Warren's Letters, with an illustration.

Nos. 5, 9, 10, may be had by all subscribers. 9 and 10 are sold at 1s. each to non-subscribers, and 6d. each to subscribers.

A complete set of the lithographs, now 40 in number, may be had by forwarding stamps at the rate of 2d. for each lithograph required.

LIST OF SUBSCRIPTIONS.

APRIL 1st TO JUNE 16th, 1869.

a denotes Annual Subscriber.

	£	s.	d.
*a*J. Morris, Esq.	1	1	0
United Encampment of St. Almeric and St. Geoffrey, Bolton	5	5	0
C. H. Burbridge-Hambly, Esq. (2nd don.)	3	3	0
*a*T. J. Kent, Esq.	2	2	0
Mrs. Barclay	5	0	0
J. Carvell, Esq.	1	1	0
*a*W. Tipping, Esq.	20	0	0
Rev. R. Heywood	1	1	0
*a*W. Harrison, Esq.	2	2	0
Rev. W. Haydon	0	10	0
Mrs. Haydon	0	10	0
Miss Haydon	0	5	0
Miss M. Clode (2nd don.)	1	0	0
A. F. Haliburton, Esq.	5	0	0
M. G.	0	5	0
Edmund Robson, Esq.	50	0	0
*a*John Miller, Esq.	1	1	0
Lodge of Meist	1	1	0
William Spiking, Esq.	5	0	0
Rev. E. Pedder	1	0	0
Rev. W. De Foe Baker	1	0	0
Chapter of Liverpool	1	1	0
Delta	3	0	0
Miss Gamlen	1	0	0
Drapers' Company	10	10	0
Rev. Dr. Pusey	30	0	0
Rev. Alex. Dixon	5	0	0
Miss Locock (2nd don.)	3	3	0
Rev. M. T. Farrer	1	0	0
*a*Rev. W. H. Bathurst	2	2	0
*a*Mrs. Fenwick	1	1	0
*a*James Duncan, Esq.	1	1	0
Hon. Mrs. Toler	2	0	0
C. D. Heathcoate, Esq.	0	10	0
Miss Mayow	1	0	0
Per Rev. John Stoughton	20	0	0
Rev. Thomas Ladds	1	0	0
*a*C. H. Millar, Esq.	3	3	0
*a*Ed. Millar, Esq.	3	3	0
Miss Yates	2	0	0
G. T. Clark, Esq. (2nd don.)	5	0	0
J. W. Thrupp, Esq. (2nd don.)	8	0	0
*a*Rev. J. Ayre	0	10	0
Morgan Yeatman, Esq.	5	0	0
Walter Cook, Esq.	1	1	0
*a*Rev. W. Bilton	2	0	0
Miss Weir	1	0	0
"Christian World Lost"	4	9	4
J. Robinson Wright (2nd don.)	5	5	0
Count de Vogüé	5	0	0
Anonymous	100	0	0
Mrs. J. Francis Thrupp	5	5	0
W. Windley, Esq. (£2 2s. *a*)	7	2	0
J. Garforth, Esq.	1	0	0
J. Waterhouse, Esq.	1	0	0
*a*Rev. J. George	0	10	6
Constitutional Lodge, No. 294	2	2	0
*a*J. G. Van Ryn, Esq.	1	0	0
Marquis of Bute	250	0	0
Rev. J. M. Denniston	1	1	0
G. C. Courthope, Esq. (£1 *a*)	5	0	0
Per Miss Goad	5	0	0
Lodge 898	2	2	0
*a*Rev. R. Champernowne	1	1	0
*a*T. Farmer Bailey, Esq.	5	0	0
R. Wilson, Esq.	5	0	0
*a*John Eccles, Esq.	0	10	0
H. Stalman, Esq.	1	0	0
R. A. A. Isaacs	0	10	0
W. Fennell, Esq.	1	0	0
"A Friend," per G. Grove, Esq.	5	0	0
Miss E. J. Grove	0	10	6
*a*A. Sperling, Esq.	1	1	0
Rev. H. T. Walford	1	0	0
District Grand Lodge of Bombay	10	0	0
Mrs. E. Fortnum	5	0	0
Miss Fanny E. Keats	5	0	6
Miss Harris	0	10	0
W. Morris, Esq.	1	1	0
*a*Miss Laura C. Retron	0	5	0
Rev. R. Price	1	1	0
*a*Mrs. Calvert Jones	1	0	0
Rev. H. Houghton	1	0	0
Mrs. Wallace	2	0	0
Per W. Appleford, Esq	1	2	0
G. H. Skelton, Esq. (2nd don.)	5	0	0
D. Inglis Money, Esq.	1	0	0
Per Mrs. Wasey	1	1	0
*a*E. Fulham Turner, Esq.	0	5	0
*a*Rev. H. West	1	0	0
Belvedere, R. A. Chapter No. 503	1	1	0

	£	s.	d.
Mrs. Rebecca Robinson	0	10	6
Miss Williams	1	1	0
A Smith, Esq.	0	2	6
G. Johnson, Esq.	1	0	0
Rev. C. A. Belli	5	0	0
Rev. Canon Hall	1	0	0
Rev. J. W. Deane	0	10	0
W. Hanks, Esq.	1	1	0
Rev. A. C. Smith	0	2	6
S. F. Ventnor, Esq.	0	1	0
*a*Rev. W. T. Fowler	1	1	0
Surrey Lodge, No. 416	2	2	0
E. Bickerton Evans, Esq. (2nd don.)	10	0	0
Rev. D. G. Watt	0	10	0
Rev. Thomas Harding	1	1	0
Per Mrs. A. Taylor	2	0	0
*a*Rev. J. Ingham Brooke	1	1	0
*a*Miss Edith Brooke	2	2	0
*a*Mrs. Hampton	1	1	0
*a*Mrs. Russell	1	1	0
Miss Willsher	0	10	0
*a*Mrs. B. Kilburn	1	1	0
W. H. Saunders, Esq.	0	10	6
J. Chapman, Esq. (£1 10s. *a*)	2	2	0
*a*R. R. Banks, Esq.	1	1	0
*a*S. F. Pells, Esq.	0	10	6
Professor Rolleston, F.R.S.	1	1	0
James Bateman, Esq., F.R.S.	5	0	0
*a*G. Ashworth, Esq.	1	1	0
H. Upton, Esq.	1	1	0
Rev. A. A. Cameron (2nd don.)	1	0	0
Thos. Hudson, Esq. (2nd don)	1	1	0
*a*Miss Skirving	1	1	0
E. B. Tyler, Esq.	1	1	0
Miss Thrupp	5	0	0
Prov. Grand Lodge N. & E. Riding Yorkshire	10	10	0
Rev. W. Cadman	1	1	0
Ditto per, collected by James Finn, Esq.	3	19	0
Rev. T. L. Warren	1	10	0
*a*Rev. Edward Bowen	1	1	0
*a*J. S. D. Llewelyn, Esq.	5	0	0
Rev. J. Barm	0	10	0
James Lees, Esq.	1	0	0
Mrs. Newman Smith (3rd don.)	5	5	0
Rev. Richmond Powell	0	10	0
A. M. Drummond, Esq.	2	0	0
E. A. Drummond, Esq.	5	0	0
*a*R. Clayton Browne, Esq., jun.	1	1	0
Rev. F. P.	0	2	6
Anon	0	1	0
G. W. Norman, Esq.	10	0	0
Rev. C. Chamberlain	1	0	0
*a*W. F. Lawrence, Esq.	1	0	0
Ven. Archdeacon Boutflower	2	2	0
W. Bevan, Esq.	5	0	0
R. Milne Redhead, Esq.	3	3	0
Rev. C. H. Bunning	1	0	0
Rev. J. J. Bonar	1	1	0
Rev. Greville J. Chester (10s. 6d. *a*)	1	1	0
Mrs. Hitchcock	0	5	0
E. W. Chapman, Esq.	1	0	0
*a*H. Smith, Esq.	1	1	0
Mrs. Wolff (2nd don.)	3	0	0
Lambton Lodge of Freemasons, Durham	20	0	0
*a*Rev. James Bagge	1	0	0
L. C. J.	1	0	0
Ven. Archdeacon Huxtable	3	0	0
Ed. Cunnington, Esq. (2nd. don.)	2	2	0
By Sale of Photographs and Publications	37	7	10
Proceeds of Lecture by Rev. T. T. Lynch, at Mornington Chapel, Hampstead Road	23	17	0
Proceeds of Lectures by Rev. G. St. Clair	21	9	9
Received by Lieut. Warren—			
American Friends	1	12	0
P. Tillard, Esq.	1	0	0
Per Rev. G. P. Haydon	1	10	0
Rev. G. Merrill, U.S.A., and party	1	8	0
Dr. Caddy, R.N.	0	16	0
Professor Wilhelm Neumann	0	16	6
Anon	0	10	0
Dr. Leon Dunbar	0	16	0
Mr. Cook	1	0	0
Mr. R. Crichton	1	1	0
Mr. J. Crichton	1	1	0
Mr. W. A. Blackhouse	0	10	0
Mr. J. H. McDonald	1	0	0
Mr. W. D. Pritchett	0	8	0
Photographs purchased by Mr. L. O. Officer, Melbourne	15	7	10
*LOCAL SOCIETY OF BATH.			
Hon. Sec.—Rev. T. P. Methuen.			
Forwarded by the Hon. Sec., being proceeds of collection at Meeting and subsequent donations	25	7	0
*LOCAL SOCIETY OF CLIFTON AND BRISTOL.			
Hon. Sec.—Rev. C. H. Wallace.			
Proceeds of lecture by Rev. H. H. Tristram	16	7	6
Donations, &c., forwarded by the Hon. Sec.	12	0	0

* The names of the donors will be given in the next Quarterly.

LOCAL SOCIETY OF HERTFORD.	£	s.	d.
Hon. Sec.—Rev. T. Lingley.			
C. Hill, Esq.	1	1	0
LOCAL SOCIETY OF FALMOUTH AND CORNWALL.			
Hon. Sec.—A. Lloyd Fox, Esq.			
Augustus Smith, Esq.	5	0	0
Rev. Prebendary Barnes	5	0	0
Colonel A. Tremayne	2	2	0
E. B. Eastwick, Esq., M.P.	2	2	0
Edmund Carlyon, Esq.	2	2	0
Viscount Falmouth	2	0	0
J. St. Aubyn, Esq., M.P.	1	1	0
Sir Colman Rashleigh, Bart.	1	1	0
John S. Enys, Esq.	1	1	0
Rev. W. Rogers	1	1	0
Robert W. Fox, Esq.	1	1	0
John Freeman, Esq.	1	1	0
Robert Fox, Esq.	1	1	0
Rev. Thos. Phillpotts	1	1	0
Rev. R. Vautier	1	1	0
P. P. Smith, Esq.	1	1	0
W. P. Dymond, Esq.	1	1	0
Rev. A. R. Taylor	1	1	0
James Jago, Esq., M.D.	1	1	0
Rev. F. H. Scrivener	1	1	0
Robert Tweedy, Esq.	1	1	0
J. F. H. Peter, Esq.	1	1	0
S. C.	1	1	0
A. Lloyd Fox, Esq.	1	1	0
Samuel Fox, Esq.	1	0	0
H. S. Slight	1	0	0
A. C. Willyams, Esq.	1	0	0
A Friend	1	0	0
Rev. J. W. Murray	0	10	6
Charles Fox, Esq.	0	10	6
Rev. G. L. Church	0	10	6
T. Coode, Esq.	0	10	6
Mrs. Hicks	0	10	6
A Friend	0	10	0
Rev. S. Rogers	0	10	0
Rev. G. Edgcome	0	10	0
Captain Wilson, R.N.	0	10	0
W. Bolitho, Esq., jun.	0	10	0
Rev. E. Hext	0	10	0
T. Hicks, Esq.	0	10	0
W. Fookes, Esq.	0	10	0
Rev. S. H. P. Bennett	0	10	0
Mrs. Hodge	0	10	0
W. Hurtles, Esq.	0	10	0
Rev. G. Holl	0	10	0
Vice-Chancellor Philpotts	0	5	0
Miss Louisa Stackhouse	0	5	0
F. Truscott, Esq., B.A.	0	5	0
Rev. J. A. B. Harry	0	5	0
W. Duncalf, Esq.	0	5	0
Miss Jane Peter	0	3	6
Rev. R. Martin	1	1	0

LOCAL SOCIETY OF LIVERPOOL.	£	s.	d.
Hon. Sec.—Rev. C. D. Ginsburg.			
The following was acknowledged in No. I. in the amount:—			
From collection at Lectures, by Rev. G. Williams	10	14	0
W. Crosfield, Esq.	2	10	0
J. A. Picton, Esq.	2	2	0
W. Ferguson, Esq.	1	1	0
Henry Cox, Esq.	1	1	0
E. S. Samuell, Esq.	1	1	0
John Eden, Esq.	1	1	0
Fletcher Rogers, Esq.	2	0	0
H. Duckworth, Esq.	1	0	0
Rev. John Evans	1	0	0
Rev. J. Clapham	0	10	6
J. A. Tinné, Esq.	0	10	0
P. F. Garnett, Esq.	0	10	0
J. Gaskell, Esq.	0	10	0
Miss Malleson	0	5	0
A. M. Owen, Esq.	0	5	0
LOCAL SOCIETY OF PLYMOUTH.			
S. Shelley, Esq.	1	1	0
Rev. T. Holmes, D.D.	4	4	0
C. Jago, Esq.	5	0	0
Anon	0	10	0
LOCAL SOCIETY OF MALVERN.			
Hon. Sec.—Rev. G. Fiske, Vicar.			
Annual Subscribers—			
Miss S. Kerr	0	10	0
The Vicar	0	10	0
Miss Mylton	0	2	6
Miss Roberts	0	2	0
Mrs. Hayward	0	2	6
Donations—			
Mrs. Bromley	0	10	0
Misses Bromley	0	5	0
Mr. Aldrich	0	5	0
Sums under 5s.	0	15	0
LOCAL SOCIETY OF NEWCASTLE-UPON-TYNE.			
Loc. Sec.—Thos. Hodgkin, Esq.			
T. L. Gooch, Esq.	10	0	0
J. Clayton, Esq.	5	0	0
Dr. Embleton	1	1	0
J. W. Embleton, Esq.	1	1	0
W. H. Budden, Esq.	1	1	0
C. J. Reid, Esq.	1	1	0
C. D. Russell, Esq.	1	1	0
Miss Barras	1	0	0

	£	s.	d.
Miss Shaw	1	0	0
F. Dodsworth, Esq.	0	5	0
Rev. N. W. Wright	0	10	0
Rev. H. J. Robjohns	0	10	0
Miss M. A. Porter	0	3	0
Mrs. Blacklock	0	5	0
Miss Harte	0	5	0
Mrs. H. Richardson	0	5	0
a Literary and Philosophical Society	3	3	0
a Thos. Hodgkin, Esq.	2	2	0
Septimus Oswald, Esq.	0	10	0
LOCAL SOCIETY OF NOTTINGHAM.			
Proceeds of Lecture	11	19	6
W. Windley, Esq.	7	2	0
Rev. T. Pyper	1	1	0
Rev. C. C. Thornton	1	0	0

	£	s.	d.
LOCAL SOCIETY OF TUNBRIDGE WELLS.			
Hon. Sec.—Rev. W. Weston Elwes.			
Collected at Meeting addressed by Rev. H. B. Tristram	35	17	1
H. S. Sims, Esq.	2	2	0
R. Williams, Esq.	0	10	0
Miss Burt	0	10	0
Miss Williams	0	5	0
Miss Hebbert	1	0	0
Mrs. Chase	0	10	6
Mrs. Clarke	1	0	0
W. F. Browell, Esq.	0	10	0
F. Skipwith, Esq.	0	10	0
Rev. W. W. Elwes	0	10	0
W. B. Maingay, Esq.	1	1	0
R. Webb, Esq.	1	1	0
G. Headlam, Esq.	0	10	0
Rev. G. Robbins	0	10	0

THE

PALESTINE EXPLORATION FUND.

STATEMENT OF PROGRESS.

Lieutenant Warren's letters (XLIII. to XLV.), published in this number of the Quarterly Statement, will be read with the deepest interest. Scarcely any shafts he has opened have yielded results more remarkable than those of the north-east angle. The rubbish through which he sunk his shaft was 110ft. deep; the stones which he found at the bottom appear to him to be *in situ;* they are most curiously cut, with a marginal draft peculiar in its construction, and different to anything which has yet been found in Palestine; the wall has the peculiar *batter*, or slope back, which has been observed in other places, but here the batter has been made use of to form the lower portion of what is now called Antonia's Tower, the tower and the wall being in the same line; the stones up to a certain height have rough faces; the rock falls 90ft. between St. Stephen's Gate and the shaft, a distance of less than 300ft., or a fall of 3 in 10; the course of the ancient valley has been traced at this point, and characters have been found on the bottom stones, which are pronounced to be Phœnician letters. For the rest, the reader is referred to Lieutenant Warren himself, in whose letters however he will find nothing but the bare facts. Conclusions must be drawn by those who read.

The first letter (No. XLIII.) appeared in the *Times* and other papers in July. It narrates the discovery of a most curious chamber or passage, which perhaps served as an overflow for the Birket Israil. Of this an engraving was given, taken from a sketch of Lieutenant Warren's, in the *Illustrated London News*.

It will be remarked that there is an interval between the dates of letters XLIII. and XLIV. of two months. The reason of this is, unfortunately, the sickness of the exploring party. This not only prevented Mr. Warren from continuing the work with his usual vigour, but has resulted in the return of one man, Corporal Ellis, invalided home, and the retreat of the whole party to Lebanon,

where it is hoped they will quickly recruit their strength. Their time in Lebanon will not be wasted, as Lieutenant Warren projects a survey and examination of the ruined Temples of Baal, which have never yet been thoroughly examined.

The paper of Lieutenant Warren, on the "Comparative Holiness of Moriah and Zion," has already appeared in the *Athenæum*, and is here partly reprinted by the kind permission of the editor. It is not printed among the continued letters, as the results arrived at by Lieutenant Warren are not based upon, and have no connection with, the work which he is doing for the Fund. It appears here, therefore, simply as a contribution to the topographical literature of Jerusalem, and must not be considered as in any way representing the views or conclusions of the Committee. These pages are open to all who have intelligence to communicate or views to maintain. Only the Committee wish it to be most distinctly understood that they are not pledged to any opinions or conclusions whatever that may here be published, and that the *only* portions of their Quarterly Statement which they adopt are the bare facts vouched for by their explorer, Lieutenant Warren.

The Exhibition of Articles found by Lieutenant Warren, and of the Photographs, &c., of the Fund, remained open for three months. The number of visitors was, in all, upwards of 6,000,* and the success of the Exhibition, put together as it was at very short notice, is sufficient to give the Committee hopes of being shortly able to open a permanent Biblical Museum, where not only the property of the Fund may be exhibited, but which may also be made a depository for whatever may illustrate or explain the Bible. The Committee have to thank Mr. Tyssen Amhurst, Mr. Greville Chester, Mr. Gerald Vesey, Mr. Freshfield, Mr. Pilleau, Mr. Noyes, and other gentlemen, for the loan of articles of great interest, and Colonel Sir Henry James for the Ordnance Survey model and photographs.

The Report of the meeting held in Willis's Rooms on June the 24th, will be read with interest. The Treasurer's and Secretary's Reports read are not printed, as the former gave the financial statement only up to the date of the meeting, and would now, therefore, be incorrect; while the latter contained little more than what appeared

* This includes the evening meetings, where schools were received, and addresses given, by Mr. MacGregor, Captain Wilson, and the Rev. F. W. Holland.

in the Quarterly No. II., "Report of Executive to General Committee." Space will not permit the speeches to be printed *in extenso*.

With a view to spreading more widely the knowledge of their society and its objects, the Committee have resolved on holding lectures during the season in the principal towns in England. They are happy to announce that the following gentlemen have undertaken this work for them:—Rev. F. H. Scrivener, Rector of St. Gerrans, Cornwall; Rev. J. W. Bardsley, Vicar of St. John's, Bootle, Liverpool; Rev. Henry Geary, Vicar of Christ Church, Herne Bay; Rev. Robert Allen, St. Mark's, North Audley-street; Rev. James King, St. George's, Hanover-square; and the Rev. George St. Clair, Banbury.

The friends of the Fund will readily perceive the great use that may be made of lectures as a means of calling attention to the work. Application may be made to any of these gentlemen, or to the Secretary, at the office of the Society.

The Committee have very great pleasure in publishing the enclosed letter, which is in course of circulation in America. That the two great nations which, more than any others, study the Bible, should work together for its elucidation, is most strongly to be desired. The letter is written and circulated by the Librarian of the Long Island Historical Society.

"Explorations in Jerusalem.

"*Library of the Long Island Historical Society,*
"*Brooklyn, N.Y., July,* 1869.

"It is well known that a society was formed in England a few years since to explore the Holy Land, what remains of it above and below the ground, and bring to bear upon it the lights of modern science. Very considerable success has already been achieved, but most considerable, as indicating how much can be accomplished by wise and patient effort. No people are more interested in this undertaking than our own; our English friends bear strong testimony to the sympathy and frequent contributions of Americans, as from time to time travellers from this country visit Jerusalem, and acquaint themselves by personal examination with these explorations. Comparatively few, however, of our countrymen are able to visit and inspect the work on the ground, and the great multitude of Bible students in this land have no opportunity to express their interest, or obtain information. For the purpose of meeting this want, and developing this interest, it is proposed to issue circulars and pamphlets, narrating the progress of the work, and send

them to all persons in this country who desire to receive them, and will be willing to co-operate to sustain the enterprise. George Hannah, Esq., the librarian of the Long Island Historical Society, has consented to perform this service for the present. It is hoped in the course of the summer that the public mind will be sufficiently instructed and aroused to unite in the establishment of some agency among us, by which American scholars and Christians can take an independent part in this great work. We are stimulated to this by the committee of the *Palestine Exploration Fund* in London, who remind us that the Government of our own country was the first to make a systematic investigation, by a properly organised party, into the geography of the Holy Land, in the expedition of Lieutenant Lynch to the Jordan Valley; and that our countrymen, Drs. Robinson and Smith, were the first to identify, by systematic investigation, the names and sites of the whole country. They propose that an American Society should share with them the prosecution of this labour, by taking a distinct portion of the work, which they are ready to assign us. If this plan should commend itself to any reader of this paper, and he should be willing to aid in the counsel and organisation of a distinct American Society, any communication from him may be directed to Mr. Hannah, and will be thankfully received.

"Contributions, also, which any friend of these explorations may wish to make, will be forwarded to the 'Fund' in London, and we shall take pleasure in sending to contributors the pamphlets and reports which are issued from time to time by the Society. We cherish the hope, however, that sufficient interest will be manifested in this country to warrant the formation of an American Society, distinct from the English, and in friendly co-operation with it. It would be best to leave Lieutenant Warren and his party to prosecute his explorations in Jerusalem without interference from any other organisation; but the *fauna* and *flora* of the country invite attention, its *geology* also, the *surveys* requisite to the formation of a complete *map*, and the *identification* of *sacred sites*. The whole region, on the other side of Jordan, the giant cities of Bashan, lies mostly unknown, and offers to scientific explorations a world of new and exciting discovery. Phœnicia, also, upon the north, is a broad field of inviting study, and will take rank with Egypt and Nineveh as a storehouse of history. American enterprise and scholarship are welcome to these untrodden fields. It will be a noble and generous rivalry to engage in with the scholars of Great Britain.

"The last intelligence that has reached this country comes from the report of Mr. Emanuel Deutsch, of the British Museum, which was published last month by Mr. Grove, Secretary of the Palestine Exploration Fund. Mr. Deutsch, in a recent visit to the East, examined the shafts and galleries of the explorers under Jerusalem, and has applied himself particularly to the study of the *letterings* or *inscriptions*, which have been found on the lower courses of stone, the foundations, which rest in their original places upon the live rock. He has come to the conclusion that these signs were in the stones when they were first laid,

and that they are Phœnician. He has been able to identify some of these characters by comparison with other undoubted antiquities in Syria; and without attempting to determine the exact meaning of these technical characters, he predicts that similar ones will be found on the corresponding courses of stone which are yet to be uncovered, and that together they will solve some vital questions regarding the plan of the whole building. He regards all these labours as yet in their infancy, and is sanguine that these *epigraphs* will yet make large additions to our knowledge of the Hebrews, Phœnicians, and other Semitic peoples. But he declares, emphatically, that if any success at all adequate to the enterprise is to be attained, the work ought to be prosecuted on a more extensive scale, and that Lieutenant Warren, instead of dismissing half his force as he did while Mr. Deutsch was with him, ought to be able to engage tenfold more assistance, and he tells the English that if they fail to support the work, some other nation will arise to take it up. We do not believe that the scholarship and wealth of England will be found wanting, and we hope that our own country will bear her a generous and sympathetic companionship."

The thanks of the Committee are due also to the Rev. W. Patton, D.D., of Chicago, for the exertions he has made in collecting subscriptions and advocating the cause.

Remittances have been received from the local societies of Edinburgh, Greenock, and Cambridge.

The receipts for the first six months of the year from all sources, and including the balance at the end of 1868, amounted in all to £2340.

The Committee have now only to invite their supporters to an effort which shall enable them to terminate their labours in Jerusalem. They remind them, in the words of a writer in the *Times*, that "the field for discovery is most extensive, and the British public have the opportunity of securing for their own country the credit of accomplishing a great work;" and, in the words of Mr. Gilbert Scott, "There is but one Jerusalem; there was but one accredited Temple of the Olden Dispensation; there was but one Holy Sepulchre. We need not, therefore, fear that the precedent will endanger our resources. We find funds for memorials to all who claim public respect and gratitude. Let us not refuse funds to investigate the sites of which the memory is bound up inseparably with the history of our holy faith, both in its earlier and later dispensations."

September, 1869.

REMAINS OF TOMBS IN PALESTINE.

BY CAPTAIN C. W. WILSON, R.E.

ANCIENT tombs are thickly scattered over the whole of Palestine, especially near those places where there are traces of the site of a town or village; measurements were made of several, and as they vary considerably in arrangement and construction, a general description of them under three heads of "Rock-hewn Tombs," "Masonry Tombs," and "Sarcophagi," with notes on the most remarkable, may be of use to future investigators.

In the following remarks the term "loculus" is always applied to the actual resting-place of the body; a "sunk loculus" is an excavation made in the surface of the rock much after the manner of a modern grave, whilst a "deep loculus" is an excavation driven into the face of the rock like a small tunnel or pigeon-hole.

Rock-hewn Tombs.—These appear to be the earliest in date, and are the tombs most commonly met with; the softer strata of limestone, especially the white chalk in some districts, are well adapted for sepulchral excavations, and it is only in a few places, such as Tel Hum and Kerazeh, where the formation is hard basalt, that this description of tomb is not found, the labour and expense of making them having probably led the inhabitants to adopt a different mode of burial.

The simplest form of tomb is that in which a grave-shaped loculus has been sunk in the rock, and a reveal cut round its mouth to receive a covering slab, which in some instances is flush with the surface of the rock, and in others raised above it and ornamented in the same way as the lid of a sarcophagus. Examples of this kind were found at Kedes, Khurbet Khureibeh above Khan Minyeh, Yarun, Iksal, near Nablus, and near the Tombs of the Kings at Jerusalem, at which latter place the covering slabs are placed almost immediately above the body, the remainder of the loculus being apparently filled up with earth or used for a second interment. (See Fig. 1.)

At Meiron there is a slightly altered form of the same kind of tomb, an arched recess being cut in the face of the rock and the loculus "sunk" beneath it; several of these are for children of all sizes, from that of an infant upwards, and both those for adults and young have a small raised bench at one end to support the head. At this place as well as a few others, a slight economy of labour is shown in making the arched recess in the rock deep enough to allow of two loculi being "sunk" side by side, with a thin partition between them, but covered by one slab let into a reveal. (See Fig. 2.)

Another simple kind of tomb found in many places is that in which a single "deep" loculus is cut in the face of the rock, and its mouth closed by a rough stone slab. (See Fig. 3.)

The most common description of tomb is that in which a number of "deep" loculi are grouped together in one or more chambers of the same excavation, and they may, for clearness, be divided into three classes.

Fig. 1.

Tombs in Surface of Rock.
Scale 10 = 1 Inch.

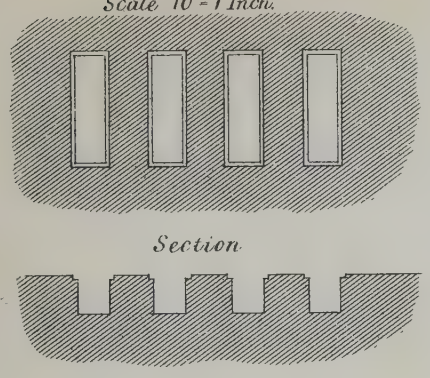


Fig. 2.

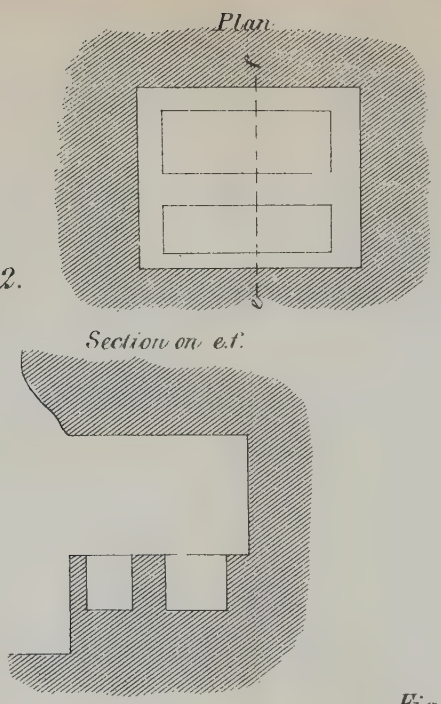


Fig. 3.

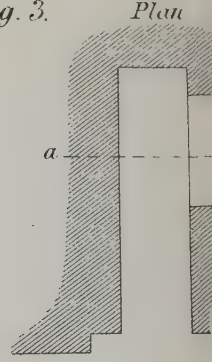


Fig. 5.

Masonry Tomb at Tel Hum.
Scale 10=1 Inch.

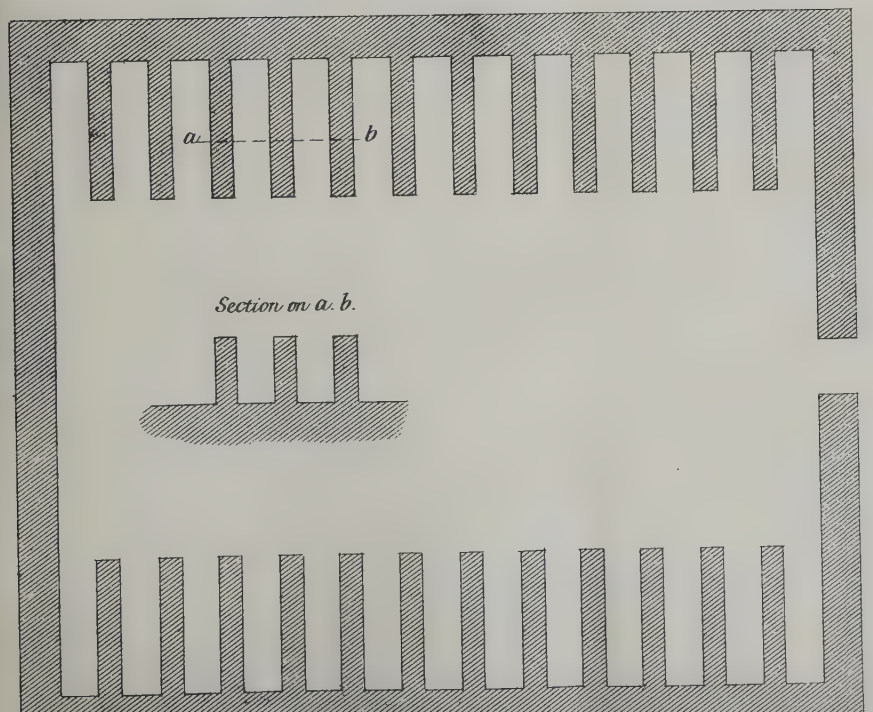
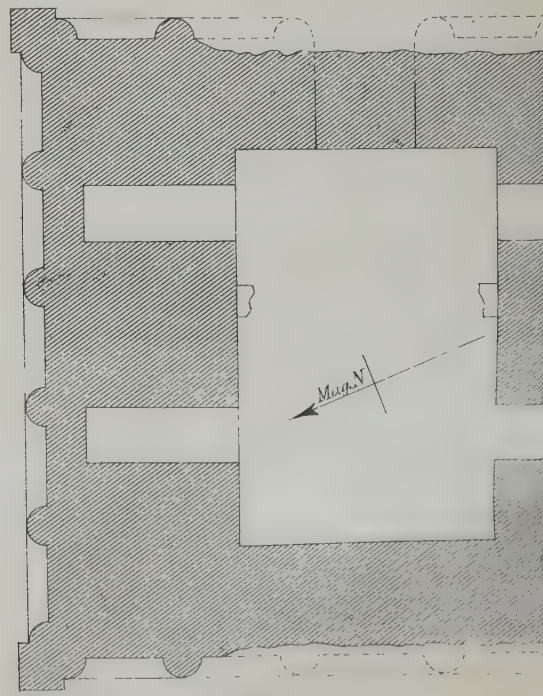


Fig. 6.

Tomb at Malul.
Scale 10=1 Inch.



Section on a.b

Fig. 4.

Tomb at Kedes.

Plan

Scale 10=1 Inch

Mag. N

B

A

Plan & Section of one Loculus.

5'-1 Inch

Section

Sarcophagi at Kedes.

Fig. 7.

Plan, Scale 1/30

C

A

B

D

Section on A. B.

Section on C. D.

Before commencing an account of them it may be as well to mention that no approximation to their relative age can be made from the shape of the loculi or chambers; some have circular heads, some square, and in the tombs at Seilun, which may be supposed to be as old as any, circular and square headed loculi are found in the same chamber, and so also of the chambers themselves where there are more than one in the same tomb.

The first class of these excavations met with in all parts of the country is that in which a natural cavern in one of the softer strata of limestone has been made use of; "deep" loculi are cut in its sides, with their beds on a level with the ground, and their mouths closed by rough stone slabs, resting against the face of the rock, or fitting into the openings without a reveal; in these cases no arrangement is made for closing the entrances of the caverns.

In the second class, also found everywhere, a square or oblong chamber is cut in the rock, and "deep" loculi are ranged along its sides, their mouths closed by neatly-dressed stone slabs fitting closely into reveals made to receive them; the entrance to the chamber is by a low square opening fitted with a slab in the same manner, or with a stone door turning on a socket hinge, and secured by bolts on the inside. In this kind of tomb there is usually a bench running in front of the loculi, and elevated from 1ft. 6in. to 3ft. above the floor of the excavation. At Kedes there is a variety of this form in which arched recesses are excavated in the sides, each large enough to contain two "sunk" loculi. Some tombs were found on Mount Ebal which had no loculi, but simply stone benches running round the sides, on which the bodies may have been laid; in the floor of these, however, there is often the mouth of a shaft which possibly leads to lower chambers, but they were full of water and could not be explored. In the same place there are also a few tombs in which benches have been left along the sides of the excavation, and loculi "sunk" in them.

The third class is that in which one entrance leads into a number of sepulchral chambers, each containing several loculi. These tombs generally have a sort of porch or vestibule hewn in the rock, in many cases, as at Jerusalem, Tibneh, and Abud, having the front of the roof supported by pillars of natural rock, which are surmounted by a frieze invariably of a debased Doric character; the spaces between the triglyphs are ornamented with floral devices, wreaths, or bunches of grapes. (See Photographs 108, 109, 141, 143, 149, 151, of the series taken for the Palestine Exploration Society.) From the porch a low door leads into an ante-chamber, with or without tombs, from which access is obtained to the tomb chambers, all of which have raised benches running in front of the loculi; the entrances to many of these chambers are ingeniously concealed, sometimes being at the end of a loculus, as at Tibneh and Jerusalem, at others in the bed of a loculus or the floor of a chamber, as at the Tombs of the Kings, and those of

the Judges at Jerusalem. Some of the chambers, instead of loculi, have arched recesses cut in their sides, on the bottom of which the body was laid either with or without a sarcophagus. At Um Keis the entrances to the tombs are closed by stone doors turning on socket hinges, but the usual method is a stone slab fitted in the manner described above. At Abud there are remains of painting, and on the sides of the porches traces of plaster. It seems to have been the object to make the chambers as nearly as possible square or rectangular, but very few of them were found to be quite true, and the sizes of the loculi and distances between them are also variable, though not to any great extent; the excavations have been made with much care and skill, a few inches being often all that is left between the ends of the loculi in different chambers.

The most remarkable of the large tombs are at Tibneh and Jerusalem. In the so-called tomb of Joshua (Photograph 108), at the former place, after passing through a chamber with fourteen loculi, a smaller one is reached which has only one loculus at its extreme end, an arrangement not noticed elsewhere; the face and sides of the porch are nearly covered with niches for lamps, and round the door are traces of plaster; some excavations were made, but none of the fragments of coarse mosaic mentioned by Monsieur de Saulcy were seen. Several tombs were opened at Tibneh, and numerous remains, including one female skeleton, found, but they appeared to be later burials, and the tombs had been previously rifled; in one there was a chamber with a simple bench running round it, on which the bodies seem to have been laid, as there was a thick deposit of bones. The Tombs of the Kings near Jerusalem is the best finished and most extensive of the catacombs (see Plate XXV. to notes on Ordnance Survey of Jerusalem); the entrance is by a low door, closed by a circular stone running in a passage which was formerly covered by a slab, but is now open; in the interior there is a large ante-chamber without loculi, from which openings, at one time closed by stone doors on socket hinges, lead off to the tomb chambers. Many of the loculi have small rectangular excavations attached to them, which are supposed to have been for treasure, and they have also channels cut lengthwise in their beds, the use of which is not very clear; in several of the chambers there are arched recesses for sarcophagi or bodies, and there are also rooms at a lower level, the entrances to which have been carefully concealed. At the Tombs of the Judges the loculi are arranged in two tiers one above the other, the lower row running in on a level with the floor, the upper from the back of an arched recess, and there is a lower chamber which has never been finished, where the mode of excavation is clearly seen. At the Tombs of the Prophets the passage is peculiarly arranged in a sort of semicircle, and the loculi are half sunk below the level of the floor, with fittings for a slab, as if they were intended for two bodies one above the other. There are many large tombs in the valley of Hinnom, each of which has some feature peculiar to itself, but the general arrangement is the

same in all; the most remarkable is one which appears to be early Christian: the roof is domed, and the loculi are sunk beneath recesses and in benches left along the sides. A large tomb has lately been discovered by Lieutenant Warren in the Kedron Valley, below Bir Eyub, and is figured in Plan No. 24 of the P. E. Fund. It is a good example of the larger kind of catacomb, but has no peculiar features such as those in the tombs noticed above. There are two tombs of great interest which hardly come under either of the above headings, that of Joseph and Nicodemus in the church of the Holy Sepulchre, and that of St. John at Samaria; in the former, which is greatly mutilated, the beds of the loculi are not horizontal in the usual manner, but have a considerable slope down to the head, and there is a small chamber containing a loculus in the floor of the tomb; in the latter, the loculi, which are in two tiers of three each, are built entirely of masonry, and the walls of the chamber are so covered with plaster, that it is difficult to say what is rock. There are, however, some arched recesses similar to those often found in tombs, which may be part of the original excavation, if the place ever were a tomb, which there are some reasons for doubting.

The number of Rock-hewn Tombs seems hardly sufficient for a large population, but it was possibly the custom to use the same loculus for several burials, a second interment taking place when the body of the first had decomposed, which it would do very rapidly in the climate of Palestine, and the removal of the bones to one common receptacle may have been what is called "the gathering to the fathers;" it may also be suggested that whilst many of the highly-finished and ornamented tombs were for noble or princely families, some of the larger ones may have been public tombs for the poor or other classes of society, and perhaps provided by the government.

Masonry Tombs.—The Masonry Tombs are few in number, and confined to the northern portion of the country. At Kedes there is a building (Photograph 38, P. E. F.) 34ft. 4in. square, with a doorway on the southern side, which leads into a chamber on each side of which are three loculi, except on the south, where there are only two, one on each side of the entrance; in the corners are piers of solid masonry, and the spaces between them were covered with semicircular arches, portions of which on the north and east remain; the centre appears to have been domed. The masonry is of plain chiselled stones set without mortar in courses from 1ft. 10in. to 2ft. 3in. in height, and the mouldings are of a simple character and well cut; on the exterior near the door is a niche 5ft. 11in. high, and round the base of the whole building runs a plinth. The loculi have been used for interments at a comparatively recent period. (See Fig. 4.) At Tel Hum two masonry tombs were found; one is built below the level of the ground, of well-dressed limestone blocks brought from a distance and set without mortar; the loculi are in the sides of a broad passage which runs round three sides of a square, and is covered by a segmental arch, plastered to keep out

the damp; the ends are closed by a thick wall, through a hole in which an entrance was obtained, there being no regular doorway; on the surface of the ground above the tomb is a level platform of basalt, which seems to have been the base of a pyramid or some other monument. The loculi of the other tomb are of the same shape as "sunk loculi," and are ranged along two sides of a rectangular building standing above ground, the walls of which are of coursed basaltic rubble cemented inside and out, and at one time apparently whitewashed. (See Fig. 5.) It is possible that in places like Tel Hum, where the rock is so hard as to make excavation difficult, this form of tomb was commonly used, and it may be suggested whether the tombs in which the demoniac lived may not have been of this description; the only rock-hewn tombs seen near the Sea of Galilee were a few south of Tiberias, and some in the cliff on the eastern side of the lake, which were almost too far from the water to meet the requirements of the Bible narrative, where the meeting with the demoniac seems to have immediately followed the landing of our Saviour (Mark v. 2); the disappearance of a tomb of this sort is not at all surprising. At Ain Elibiéni there are the remains of a building over some rock-hewn tombs; the outside is decorated with pilasters, and the covering arch is segmental, but it is in such a ruined state little can be made out of it. At Malul, near Nazareth (see Fig. 6), the tomb is a chamber covered by a semicircular waggon vault, in the sides of which are four large loculi for sarcophagi; the present entrance is through one of these, the original door, which is at the eastern end of the building, being closed with masonry; the exterior is ornamented with half engaged columns, and on the northern side, which is best preserved, some of the pedestals can be seen resting on a sub-base, with a simple moulding; the masonry is of well-dressed stones set in a dark-coloured mortar of good quality; two Ionic capitals of coarse workmanship were found on the ground close by. The tomb is now used as a church by the native Christians. The tomb at Teyasir (Photograph 97) is square, and has four pilasters on each side; there are the remains of a moulded plinth, and the door is standing, but all above has been destroyed; in the corners are solid piers of masonry similar to those at Kedes, but there are no traces of loculi.

Sarcophagi.—Of the sarcophagi, those at Kedes are the most elaborately ornamented; not far from the masonry tomb described above, there is a very remarkable group, formerly elevated on a masonry platform, but now, with the exception of one, overturned. (See Photograph 40.) Some of these (see Figure No. 7) are made to contain two bodies laid in opposite directions, and at the bottoms of the loculi are small raised pillows to take the heads; the covers are pent shaped, and covered with a leaf-like ornament. (See Photograph 42.) The material out of which the sarcophagi are hewn is hard white limestone, almost marble, and the workmanship is excellent; the usual design on the sides is a garland held up in two or more loops by nude figures, with some

device over each bend, and a bunch of grapes hanging from the bottom. The ornament has been disfigured and worn away, so that it is difficult in many cases to see the design, but on one which was uncovered (see Photograph 47) the carving was sharp and good, though the faces and busts of the figures had been purposely mutilated; they consisted of a winged female figure with flowing drapery at each corner, and two figures on the sides holding up a garland, over which are a vase, flowers, &c., and from which hang bunches of grapes. On the end of the lid of one of these sarcophagi is a shield and sword (see Photograph 42), and on one seen in another part of the country are a shield and three javelins. A sarcophagus with three loculi, and a flight of steps leading up to it, was found by Lieutenant Anderson, R.E., on Tel Khureibeh, near Kedes. At Um Keis there are a number of sarcophagi in good preservation, which appear to have been ranged in two rows, one on each side of a road leading out of the city, and it has been the fashion to make them of black basalt, which does not take nearly such a fine finish as the limestone, of which there is abundance around. They are all for single bodies, and the prevailing ornaments are garlands held up by nude figures, faces, bulls' heads, &c., with discs, flowers, busts of men, &c., over the loops; the absence of the scroll of vine leaves with grape pendants is very marked, and none of them can compare with those at Kedes for graceful design and delicate execution. At Kefr Kana, Nazareth, Sephuriyeh, and the villages round them, the sarcophagi invariably have a plain ornament. At Lydda some apparently Christian sarcophagi were found in a catacomb built of masonry, and on one was an inscription in Greek; all the lids had round tops, which, perhaps, shows a later date, as those at Kedes, Um Keis, and elsewhere, are always pent-shaped.

C. W. Wilson, Captain R.E.

KEFR KENNA.

BY THE REV. DR. ZELLER.

Situation:—Kefr-Kenna lies five miles N.E. of Nazareth on the direct road to the Sea of Galilee. It is bordered towards the west and north by the plain of Battauf. Its situation is particularly suitable, pretty and healthy, for the village lies on a hill gradually sloping down towards the west, so that the houses, built in terraces up the slope, receive the cool west wind which has through the plain of Battauf a free and strong current over the village. On the south the village is separated by a valley from the higher mountains (called Jebel Esseeh) separating it from Mount Tabor and the plain of Iesreel. At the south of the village is a copious fountain of excellent water. The present village contains about 200 houses, half of them belonging to Greek Christians, and the other half to Moslems. It covers only the

middle and southern slope of the hill, whilst there are sufficient traces that in former times the village was *at least thrice as large*, and the excellent situation, with the copious supply of water, certainly afforded space for a large place. The gardens at the foot of the hill are luxuriant, and the pomegranates produced there the best in Palestine.

The situation of Kana el Telit, or, as the Arabs call it, *Khurbet Kana*, does not bear a comparison with that of Kefr Kenna. It lies on a very narrow terrace, scarcely to be called a terrace, on the steep side of the hill bordering the plain of Battauf, eleven miles to the N.N.W. of Nazareth, and six miles to the N.N.W. of Sapphoorye. Kana faces the south, and being directly exposed to the hottest rays of the sun, which take peculiar effect on the steep and rocky side of the hill, the position is in summer exceedingly hot, and it is so little elevated over the plain that no pure mountain air is obtainable. No spring water is near, and the two or three cisterns supply only a small quantity of water, and the area suitable for building is exceedingly limited.

Traces of Ruins.—These consist in Khurbet Kana only of one or two fragments of small columns and a cistern which might be old. The people of Sachneen formerly cultivated part of the plain of Battauf, and built there a number of hovels for their cattle which now are ruined.

In Kefr Kenna, however, traces of ruins are very distinct and of considerable extent. The ruins of the church at the foot of the hill are well known. Two years ago, when the Latins made an attempt to appropriate this ruin, the jealousy of the Moslems of the place was awakened. They intended to rebuild this place, which had been a mosque, laid open the western wall of the church which had been hidden under ground, and, to the astonishment of all, it appeared that the foundations were constructed of very large well-cut stones. The thickness of the wall is 7—8 feet. This foundation very much differs in its material from the material of the ruins still in existence above ground. These consist of small stones 1½ft. in height, and 2—3ft. in length.

About thirty paces to the west of the church is a ruin called by the Christians the house of Samaan (the father of the bridegroom), of Saracenic construction, perhaps of equal date with the upper part of the church, but the foundation of this building is said to contain large stones of superior workmanship similar to those of the church. Two large columns of very white hard limestone, and two others of yellow limestone, lie prostrate in the ruined church, also a fine pedestal of a column. All over the village are found traces of old foundations, also occasionally arches built of well-hewn stones. Still in existence above ground are two large strongly-built vaults, perhaps from the time of the Crusaders. In the south of the village lies half of a large limestone column.

Facing Kefr Kenna to the west, about half a mile distant, is an elevation called the "*Deir*" (or monastery), where I discovered the

foundations of walls built of large well-dressed stones. This seems to coincide with Saewulf, A.D. 1103, who describes Kana as nearly six miles north of Nazareth on a hill, and says: nothing there remained except a *monastery* called Architriclinium.

Half a mile farther to the west, about a mile west from Kefr Kenna, stands a conical hill covered on all sides from top to bottom with the ruins of old buildings, especially foundations. This place is called Kenna, or Khurbet Kenna. On the south side there are six or seven large old cisterns: one of them has a small pond attached to it, with steps leading down, and the cement on the pond and several of the cisterns still perfect. One of the cisterns is covered with a square block of stone 4ft. in height and breadth, also the fragment of a stone door lies among the ruins. On the north side a piece of wall consisting of three layers of large stones is still in existence, about 40ft. long. Some of the stones are about 4ft. in length. The weather has washed away the cement and injured the stone. Evidently these foundations are of great antiquity; similar strong foundation walls are to be traced along the slope, and on the top of this Tell. Most of the smaller and better preserved stones have been used by the people of "Mishhed" to rebuild their houses.

The name of "Kana el Telîl" is evidently only known since Robinson's discovery, by which many travellers went to Khurbet Kana. The Arabs know it *only* by the name of "Khurbet Kana," and the Christians of Palestine never doubted the identity of Kefr Kenna with the Kana of the Gospel. The Greek Christians built their houses all round the ruins of the church, but being prevented by the Moslems from rebuilding the same, they erected a church a few paces only to the west of the old ruin, between the same and the so-called house of Samaan.

The word "Kenna" is not an Arabic word, but must be traced to the Hebrew word קָנֶה, which means "cane," or "reed," though cane, at least at the present time, is not to be found in the plain of Battauf, neither at Khurbet Kana nor at Kefr Kana. It grows in some marshy places in the plain of Esdraelon, and very abundantly at the Jordan, where a certain Bedawin tribe (the Ghazaz-wes) use it for constructing their hovels.

The mentioning of Kana in Josephus when he marched from Sephoris to Tiberias, certainly directs us to Kefr Kenna, and not to Khurbet Kana (or Kana el Telîl), which latter place would have been out of his way. The narrative of the gospel that our Lord went to Kana, and from there to the Sea of Galilee, is also in favour of Kefr Kenna, because this place lies in the direct road from Nazareth to the Sea of Galilee. The fact that two of the disciples of our Lord (Nathanael and Simon) were from Kana, lets us suppose that our Lord was frequently at that place. Would it not seem strange that (if Kana is where Dr. R. puts it) no mention is made of Sephoris, then the principal place in Galilee, though the direct road from Nazareth to "Khurbet Kana" would have led our Lord through that town?

TABLE OF LATITUDES AND LONGITUDES OF PLACES BETWEEN JERUSALEM AND BANEAS.

	Latitude, N.			Longitude, E.		
Jerusalem, Dome of the Rock	31°	46′	47·2″	35°	14′	42″*
,, Cross, Cathedral, Russian buildings	,,	47	00·5	,,	14	00
Tel Azur	,,	58	15	,,	17	14
Mount Gerizim (Wely)	32	12	28	,,	17	01
,, Ebal (Summit)	,,	14	17·5	,,	16	58
Tebel Duhy (Little Hermon) Wely ...	,,	37	04·6	,,	21	26
Nazareth (Wely)	,,	42	35·6	,,	18	15·7
Safed Castle	,,	58	08·1	,,	30	25
Conical hill, near Sasa	33	02	03·9	,,	22	53·3
Camp at Alma	,,	03	25·9	,,	30	20·1
Wely, Baneas	,,	14	48·3	,,	42	05·5
Beit Jenn (centre of village)	32	57	50	,,	23	32
Camp at Meiron	,,	58	47	,,	27	02
Jebel Jermuk, West Summit	33	00	14	,,	24	53
,, ,, East Summit	32	59	58	,,	25	24
Village, El Jermuk	,,	59	24	,,	24	57
Rameh (centre of village)	31	56	27	,,	22	53
Jebel Zabood (S.E. spur of Jermuk) ...	,,	56	25	,,	28	21
Ferathi	32	56	00	,,	26	28
Kefer Anan	,,	55	28	,,	25	58
Akbara	,,	56	10	,,	30	37
Kalat Shuny	,,	54	35	,,	29	55
Tel Hazur	,,	54	14	,,	25	03
Moghar (centre of village)	,,	54	00	,,	25	05
Suknin	,,	52	05	,,	18	33
Deir Hannah	,,	51	50	,,	22	37
Arrabeh	,,	51	13	,,	21	19
Tel Hazwa	,,	51	05	,,	23	05
Ailaboon	,,	50	38	,,	24	47
Yazoog	,,	52	40	,,	29	45
Cana	,,	48	42	,,	18	40
Romaneh	,,	47	40	,,	19	38
Sepphoris	,,	45	37	,,	27	36
Kefr Kenna	,,	44	49	,,	20	07
Mt. Precipitation (South of Nazareth) ...	,,	41	05	,,	18	40
Mt. Tabor (centre)	,,	41	20	,,	24	07
Zubeiyeh	,,	46	35	,,	26	15

* Maunsel's longitude of the Dome of the Rock is used as a starting point, the latitude is our own. C. W.

	Latitude, N.	Longitude, E.
Kurn Hattin (centre)	32° 48′ 08″	35° 25′ 27″
Kerazeh	,, 54 25	,, 34 20
Et Tell	,, 54 24	,, 37 52
Entrance of Jordan into Sea of Galilee...	,, 53 36	,, 36 57
Exit ,, out of ,, ,, ...	,, 43 08	,, 35 04
Tel Hum	,, 52 43·6	,, 34 58
Tabiga	,, 52 23	,, 33 38
Mejdel	,, 49 40·6	,, 31 37
Tiberias (N.E. corner of castle)	,, 47 29·8	,, 32 58
Khan Minyeh	,, 51 50·0	,, 32 44
Kefr Harîb	,, 45 42	,, 39 48
Gamala	,, 46 54	,, 39 43
Ruins, Kersa	,, 49 40	,, 39 12
Exit of Jordan (Waters of Merom) ...	33 02 35	,, 38 27
Delata	,, 1 44	,, 30 48
Jish	,, 1 40	,, 27 24
Wely above Hurfash	,, 0 45	,, 21 03
Sasa	,, 1 48	,, 24 23
Kefr Birim Camp	,, 02 50·6	,, 25 36
Salhah	,, 4 47	,, 28 26
Yaroon	,, 4 48	,, 25 53
Tel Kureibeh	,, 4 45	,, 32 33
,, Harah	,, 5 33	,, 34 21
El Malakiyeh	,, 6 20	,, 29 32
Kedes (camp at)	,, 6 52·2	,, 32 27
Berit Jebeil	,, 7 12	,, 27 00
Buleideh	,, 8 04	,, 31 57
Khunin	,, 8 51	,, 26 57
Wely Habîb	,, 9 17	,, 31 02
Junction of Jordan and Baneas	,, 11 02	,, 37 33
,, Leddan and Baneas... ...	,, 11 42	,, 38 00
Wely Hoodah	,, 13 03	,, 39 57
Tel el Kadi (source of Leddan)	,, 14 46	,, 39 22
Jebbata	,, 15 30	,, 44 39
Hunin Camp	,, 13 00	,, 33 12
Peak above do.	,, 12 25	,, 32 50
Abel	,, 15 35	,, 35 20
Jesr el Ghadjar	,, 14 27	,, 37 47
Ghadjar	,, 16 00	,, 37 47
Tibneh (S. extremity of castle)	33 11 33	35 25 45

This table, now published for the first time, is from the observations made by Captain Wilson and Lieutenant Anderson in 1866.

THE COMPARATIVE HOLINESS OF MOUNTS ZION AND MORIAH.

BY LIEUTENANT WARREN, R.E.

THE chief information extant on the subject of Jerusalem and Zion is to be found in the historical and poetical books of the Old Testament, the books of the Maccabees, and the works of Josephus.

Of these four sources, the first two are portions of the Inspired Writings, and therefore to them must we look for our most trustworthy information; we must, however, take into consideration the licence permitted in poetical works, and on this account it is proposed to examine the subject entirely from the Historical Books first; and for this purpose all the information which could be found bearing on the subject has been extracted.

From these extracts it will appear that Jerusalem, Zion, and Moriah were not interchangeable terms, but were fixed places,—the former being the Holy City, the two latter portions of Jerusalem, whose positions can nearly be determined, as we know one of them (Moriah) at the present day. Passing to the Poetical Books, we shall find that a parallelism exists with regard to the holiness of Mounts Zion and Moriah, which explains the apparent discrepancies hitherto creating so many difficulties in fixing these sites. Thence passing to the Maccabees, we shall find that this parallelism accounts for the change in the position of the name Sion; and following up the clue, we find the accounts of Josephus connected with those of the Old Testament, and through him bringing down the position of Mount Zion until we can fix it with considerable precision at the present day.

Now although these results differ considerably from those of the works on Jerusalem I have yet seen, yet I must acknowledge having arrived at them by continually conning over the arguments of the several writers, and finding in each case that there was something wanting to make it perfect; this something I believe I have found in the parallel holiness of Mounts Zion and Moriah.

HISTORICAL ACCOUNT.

Joshua x. 37. Adoni-zedec, King of Jerusalem (slain by Joshua).

Judges i. 1-8. And they brought him to Jerusalem, and there he died.—8. Now the children of Judah had fought against Jerusalem, and had taken it, and smitten it with the edge of the sword, and set the city on fire.

Joshua xv. 63. As for the Jebusites the inhabitants of Jerusalem, the children of Judah could not drive them out: but the Jebusites dwelt with the children of Judah at Jerusalem unto this day.

Joshua xviii. 21. Now the cities of the tribes of the children of Benjamin according to their families were . . . . Jerusalem . . . .

Judges i. 21. And the children of Benjamin did not drive out the

Jebusites that inhabited Jerusalem; but the Jebusites dwelt with the children of Benjamin in Jerusalem unto this day.

Judges xix. 1. A certain Levite came over against Jebus, which is Jerusalem; and the servant said, Come, I pray thee, and let us turn into the city of the Jebusites, and lodge in it. And his master said unto him, We will not turn aside hither into the city of a stranger, that is not of the children of Israel.

1 Sam. xvii. 54; 2 Sam. v. 3.

1 Chron. xi. 4. And David and all Israel went to Jerusalem, which is Jebus; where the Jebusites were the inhabitants of the land. And the inhabitants of Jebus said to David, Thou shalt not come hither. Nevertheless, David took the castle of Zion, which is the city of David. And David dwelt in the castle; therefore they called it the city of David. And he built the city round about, even from Milo round about: and Joab repaired the rest of the city.

2 Sam. v. 11; 1 Chron. xiv. 3; 1 Chron. xv. 1.

2 Sam. vi. 12. So David went and brought up the ark of God from the house of Obed-edom into the city of David with gladness . . . . —16. And as the ark of the Lord came into the city of David, Michal, Saul's daughter, looked through a window, and saw King David leaping and dancing before the Lord . . . .—17. And they brought in the ark of the Lord, and set it in its place, in the midst of the tabernacle that David had pitched for it: and David offered burnt-offerings and peace-offerings before the Lord.

1 Chron. xvi. 37. So he left there before the ark of the covenant of the Lord Asaph and his brethren, to minister before the ark continually, as every day's work required.—38. And Obed-edom with their brethren, threescore and eight; . . . .—39. And Zadok the priest, and his brethren the priests, before the tabernacle of the Lord in the high place that was at Gibeon.

2 Sam. vi. 20; 1 Chron. xvii. 1; 2 Sam. viii. 1.

2 Sam. xi. 1. David tarried at Jerusalem.

2 Sam. xv. 24. And lo Zadok also, and all the Levites were with him, bearing the ark of the covenant of God.—25. And the king said unto Zadok, Carry back the ark of God into the city.—29. Zadok therefore and Abiathar carried the ark of God again to Jerusalem.

2 Sam. xx. 3.

1 Chron. xxi. 15. And God sent an angel unto Jerusalem to destroy it. . . . And the angel of the Lord stood by the threshing-floor of Ornan the Jebusite. And David lifted up his eyes, and saw the angel of the Lord stand between earth and heaven, having a drawn sword in his hand stretched over Jerusalem.—18. Then the angel of the Lord commanded Gad to say to David, that David should go up, and set up an altar unto the Lord in the threshing-floor of Ornan the Jebusite.—19. And David went up at the saying of Gad. . . .—20. And Ornan turned back, and saw the angel; and his four sons with him hid themselves. Now Ornan was threshing wheat.—21. And as David came to Ornan,

Ornan looked and saw David, and went out of the threshing-floor, and bowed himself to David with his face to the ground.—22. Then David said to Ornan, Grant me the place of this threshing-floor, that I may build an altar therein unto the Lord.—26. And David built there an altar unto the Lord, and offered burnt-offerings and peace-offerings, and called upon the Lord; and he answered him from heaven by fire upon the altar of burnt-offerings. . . .—28. At that time when David saw that the Lord had answered him in the threshing-floor of Ornan the Jebusite, then he sacrificed there.—29. For the tabernacle of the Lord, which Moses made in the wilderness, and the altar of the burnt-offering, were at that season in the high place at Gibeon.

1 Chron. xxii. 1; 1 Kings i. 39.

1 Kings ii. 10. So David slept with his fathers, and was buried in the city of David.

1 Kings iii. 1. And Solomon took Pharaoh's daughter, and brought her into the city of David, until he had made an end of building his own house, and the house of the Lord, and the wall of Jerusalem round about.—4. And the king went to Gibeon to sacrifice there.

2 Chron. iii. 1. Then Solomon began to build the house of the Lord at Jerusalem in Mount Moriah, where the Lord appeared unto David his father, in the place that David had prepared in the threshing-floor of Ornan the Jebusite.

1 Kings vii. 51.

1 Kings viii. 1. Then Solomon assembled the elders of Israel and all the heads of the tribes, the chief of the fathers of the children of Israel, unto King Solomon in Jerusalem, that they might bring up the ark of the covenant of the Lord out of the city of David, which is Zion.

1 Kings viii. 6; 2 Chron. vi. 1.

2 Chron. viii. 11. And Solomon brought up the daughter of Pharaoh out of the city of David unto the house that he had built for her; for he said, My wife shall not dwell in the house of David king of Israel, because the places are holy, whereunto the ark of the Lord hath come.

2 Chron. ix. 3. And when the Queen of Sheba had seen the wisdom of Solomon, and the house that he had built . . . . and his ascent by which he went up into the house of the Lord, there was no more spirit in her.

1 Kings xi. 27. . . Solomon built Millo, and repaired the breaches of the city of David his father.—43. And Solomon slept with his fathers, and was buried in the city of David his father.

2 Chron. xx. 28.

2 Chron. xxi. 20. . . . . Howbeit they buried him (Jehoram) in the city of David, but not in the sepulchres of the kings.

2 Kings xii. 20. . . . . and slew Joash in the house of Millo, which goeth down to Silla.

2 Kings xiv. 13. And Jehoash king of Israel . . . . brake down the wall of Jerusalem from the gate of Ephraim unto the corner gate, four hundred cubits.

2 Chron. xxiii. 27. And Ahaz slept with his fathers, and they buried

him in the city, even in Jerusalem: but they brought him not into the sepulchres of the Kings of Israel.

2 Chron. xxx. 1. . . . . house of the Lord at Jerusalem.

2 Chron. xxxii. 5. . . . . and repaired Millo in the city of David.

2 Kings xviii. 22; 2 Chron. xxxiii. 30; 2 Chron. xxiii. 4.

2 Chron. xxiii. 7. In this house, and in Jerusalem.

2 Kings xix. 21. The virgin the daughter of Zion hath despised thee, and laughed thee to scorn; the daughter of Jerusalem hath shaken her head at thee.—31. For out of Jerusalem shall go forth a remnant, and they that escape out of Mount Zion.

2 Kings xxi. 4.

2 Chron. xxxiv. 29. Then the king sent and gathered together all the elders of Judah and Jerusalem . . . .—32. And he caused all that were present in Jerusalem and Benjamin to stand to it.

2 Chron. xxxvi. 14. . . . . and polluted the house of the Lord which he had hallowed in Jerusalem.—19. And they burnt the house of God, and brake down the wall of Jerusalem, and burnt all the palaces thereof with fire, and destroyed all the goodly vessels thereof.

Ezra speaks of the house of the Lord in and at Jerusalem.

From the above passages we find that, in the time of Joshua, Jerusalem was a city with a king, Adoni-zedec. On the partition of Palestine among the tribes of Israel, we find Jerusalem allotted to Benjamin, the boundary line running south of Jebus; and the children of Benjamin could not drive the Jebusites out, but dwelt with them. And, again, though Jerusalem is not allotted to Judah, we find Judah taking and burning Jerusalem, and putting the inhabitants to the sword; and, further on, that Judah could not drive the Jebusites out, but dwelt with them. Now from this alone we must conclude that some part of Jerusalem lay in the tribe of Judah, although the boundary line passing south of Jerusalem places it in Benjamin. But still there would exist a confusion in the mind upon the subject were we not able, from the succeeding history, to conclude that there were two portions to Jerusalem in the earliest times—a citadel and a suburb: a portion so well fortified that the children of Benjamin could not take it, and a part badly fortified, which Benjamin and Judah did take and dwell in. It is, however, better to let this question wait until we arrive at a correct notion of the appearance of Jerusalem when taken by King David. We find, then, that David went to Jerusalem which is Jebus, and took the stronghold or castle of Zion, which, in consequence, received the name of the city of David:

"And he dwelt in Zion, which is the city of David, and he built the city round about, even from Millo round about, and Joab repaired the remainder of the city."

Now it is evident that this "city," Zion, was not a mere tower, for we hear afterwards of David's house being built there; and the household for his families was there; and the *houses* for the ark of God, in which we may presume were offices for Asaph and his brethren, and

Obed-edom with their brethren, threescore and eight, and the priests; and the Royal Sepulchres were also there, and Millo, which latter, from the allusions to it, may be supposed to have been the *dernier-ressort*, the strongest point in Zion. It is thus evident that Zion fully deserved the name of the "city" of David, and that it was a stronghold of very considerable extent; but, on the other hand, it is no less certain that it formed part and was the citadel of Jerusalem. There are many passages to prove this in the historical books, and not one to show that Jerusalem was a part of Zion. David took more wives at Jerusalem, and children were born to him in Jerusalem. When Joab went against Ammon David tarried at Jerusalem; when David fled from Jerusalem, the priests carried the ark of God *again* to Jerusalem, and they tarried there; and David came to his house at Jerusalem. Now, if Zion were not a part of Jerusalem, it could not be said that the ark was brought *again* to Jerusalem, after it had been deposited in Zion; and the same with David's house. Now, it is equally clear that Zion was not synonymous or co-extensive with Jerusalem, for we find Zion is only mentioned when it is desirable to fix the particular position of some building, &c., while Jerusalem is used to denote the city generally. Thus, having once said that David's house was in Zion, it was not necessary to keep recurring to that fact; but the term Jerusalem is used generally, except in a few instances, where it is necessary to make a distinction between the several parts of Jerusalem; for example, David's burial, the bringing of Pharaoh's daughter to the city of David until another house should be built for her in Jerusalem, the taking of the ark out of Zion to the temple, &c. We have not a single instance in the historical books of the term Zion, or the city of David, being used for the whole city.

It appears, then, that Jerusalem was the name for the whole city, walled and unwalled, and that Zion, the city of David, was the name for a portion of it better fortified than the rest: this appears also when David built the city round about, and Joab repaired the remainder of the city, and when Solomon built the walls of Jerusalem, and repaired the breaches of the city of David his father. It is also apparent that Zion was on the northern side of the Holy City, for it appears to have been within the boundary of Benjamin.

We may now proceed to examine the question of Mount Moriah.

This hill appears in David's time to have been close to and without the city of Jerusalem. It would hardly seem necessary to point out that Mounts Zion and Moriah were distinct hills, were it not that of late years they have been pronounced by some writers to be identical. In the first place, for many years after King David captured Jerusalem, Zion was a royal city, while Moriah must have been beyond Jerusalem, and was the private property of a sheikh or chieftain of the Jebusites. Then, again, David had to go up to Mount Moriah, which he could not have done had the two been identical; then we have the grand ceremony of bringing the ark of God *out of the city of David, which is Zion*, up to Mount Moriah.

Two of the great acts of Solomon's life were, building the house of the Lord on Mount Moriah, and building the walls of Jerusalem, and thus joining Moriah to and making it part of the Holy City; and we have every reason to suppose that Moriah was distinct from Zion; for while Zion, the city of David, is frequently mentioned with reference to the royal sepulchres, &c., we have, after the building of the Temple, Jerusalem marked as the Holy place *par excellence*. For example, when David goes up at first to the threshing-floor, he says, "This is the house of the Lord God." Again, we have, "But I have chosen Jerusalem that my name may be there .... Jerusalem the city which I have chosen to put my name there .... And they came to Jerusalem .... unto the house of the Lord .... House of the Lord at Jerusalem .... In Jerusalem shall my name be for ever .... In Jerusalem will I put my name .... the house of the Lord which he had hallowed in Jerusalem:"—and in no single instance is this said of Zion after the building of the Temple. To make this the more remarkable, we have two instances where the historian, quoting from the poetical book of Isaiah, says, "The virgin the daughter of Zion hath despised thee; the daughter of Jerusalem hath shaken her head at thee."—"For out of Jerusalem shall go forth a remnant, and they that escape out of Mount Zion." Thus marking the difference in mentioning the Holy City in prose and poetry. We have, then, the Holy City of Jerusalem containing at least two distinct hills, which are Zion and Moriah, the remaining portion of the city probably resting on a third hill and the intermediate valleys. Now, if we place three round-shot close together, we have a rough model of Jerusalem in the time of Solomon, the shot to the north being Mount Zion, that to the south-east Moriah, and that to the south-west the remainder of Jerusalem.

Now, having the figure of Jerusalem in our minds, we may again recur to the question of the boundary line between the two tribes. merely to notice 2 Chron. xxxiv. 29, where it says—"the elders of Judah and Jerusalem—all that were present in Jerusalem and Benjamin"—which successively places Jerusalem within the boundary of each tribe. And as there can be little doubt that Zion the stronghold was in Benjamin, we have nearly the certainty that the remainder of the Holy City was to the south of Zion.

And now we come to mention what appears to be the key to the topography of the Holy City, the parallel holiness of Mounts Zion and Moriah.

During the latter years of King David's life Moriah was selected as the abode of God's name, but Mount Zion was the hill on which the ark of God was placed during the full tide of David's strength and successes, and on which it rested throughout his trying family troubles; and there can be little doubt that a large number of his psalms were penned during that period. No wonder then that he should continually sing the praises of Zion; the stronghold which he had captured after it had resisted the arms of Israel nigh four hundred years,—the house of

the Lord where he offered up burnt-offerings and peace-offerings,—the site of his palace,—where his children were born,—where he brought up Absalom,—the royal city in which he had built so much and where he probably had arranged for his burial; no wonder then that this city of David was made famous in his songs. And further, Zion was a holy hill not only during part of David's reign; even after he had said of Mount Moriah, "This is the house of the Lord God," Zion still remained a holy place, the seat of the ark of God; and in it Solomon, when anointed king, offered burnt and peace-offerings; and even after the ark of God had been taken out of the city of David and placed on Mount Moriah, Zion still appears to have remained holy; for did not King Solomon take his wife, the daughter of Pharaoh, out of the city of David unto a house he had built for her? for he said, "My wife shall not dwell in the house of David, King of Israel, for the places are holy whereunto the ark of the Lord hath come." This, then, is apparently the key to the great question about Mounts Zion and Moriah.

Mount Moriah was added to Jerusalem, and therefore we have, in the historical books, the mention of the "Lord's name in Jerusalem;" but in the poetical books the first songs were penned before ever David knew of the existence of Mount Moriah beyond its being the threshing-floor of a Jebusite; and all his thoughts were concentrated in Zion, the seat of the ark of God. Therefore it is we have in those Psalms ascribed to David such expressions as "My holy hill of Zion;. . . . Lord which dwelleth in Zion." But it is important to remark, that in Psalm lxviii., ascribed to David at the dedication of the materials for the future Temple on Mount Moriah, he at once marks the difference, and for the first time says, "Because of thy temple at Jerusalem." In Psalm cxxxii. we also find Jerusalem alone spoken of as the house of God. We therefore come to the conclusion that until the dedication of the materials for the Temple on Mount Moriah, King David celebrated the praises of Zion alone, but that afterwards he indifferently used the names either of Jerusalem or Zion, or used them both in apposition, taking advantage of that beautiful parallelism for which Hebrew poetry is noted, and which, though it runs throughout the earlier Psalms, is not applied to Jerusalem itself until about the forty-seventh to the fifty-first Psalm, when Jerusalem possessed two holy places in one.

If we now examine the poetical books, we shall find Zion, or Mount Zion, used indifferently and vaguely, first, for the city of Jerusalem generally; secondly, for the city of David, Zion proper; thirdly, for the house of God in a figurative sense. We also find Jerusalem used in the first and third senses, if not in the second; but by far the greater number of passages mention Jerusalem or Zion in a figurative sense—meaning the children of Judah generally, or the abode of God's name,—and not in such a manner as to denote any particular piece of ground.

A few examples are here given:—

1. *Zion, meaning the whole City of Jerusalem.*—Psalm cxlix. 2; lxxxvii. 2. Isaiah xxxiii. 14. Joel ii. 1.

2. *Zion, meaning Zion proper, the City of David.*—Psalm xlviii. 12; lxxiv. 2. Isaiah xxx. 19. Micah iv. 8.

3. *Zion, meaning the House of God.*—Psalm ix. 11; xcix. 2; cxxxii. 13; cxlvi. 10. Isaiah viii. 18. Jeremiah viii. 19. Micah iv. 7.

With regard to Jerusalem, we find the term used, of course, frequently in its proper sense:—

Psalm lxxiv. 1; cxxv. 2. Ezekiel iv. 1.

4. *Jerusalem, meaning the House of God.*—Psalm lxviii. 29; cxxii. 1, 9; cxxxvii. 5. Isaiah xxvii. 13; xliv. 20; lxii. 7. Jeremiah iii. 17. Ezekiel xxxvi. 30. Zechariah ii. 12; viii. 3.

We thus find that after the latter days of King David, Jerusalem or Zion, when mentioned separately in the poetical books, are used as interchangeable terms, meaning either the Holy City or the house of God. We also find this to be the case in the parallel passages; so much so, that Judah or Israel also stand in places for the sanctuary.

Psalm lxxvi. 2; cii. 21; cxiv. 2; cxxxv. 21; cxlvii. 12. Isaiah ii. 3; xxiv. 23. Joel ii. 32; iii. 16. Micah i. 5. Zechariah iii. 2; viii. 3.

Again, if we proceed further, we find that Jerusalem and Zion are denounced both singly and in the parallel passages:—

Isaiah iii. 16; iv. 4; xxxiii. 14. Jeremiah xiv. 19; xxx. 17. Lamentations iv. 2. Micah iii. 10.

It thus appears from the preceding examples that from the poetical books alone no idea of the relative meanings of Jerusalem and Zion can be obtained; it yet, however, remains to be shown that from the parallel passages, when taken individually, it can be proved that Jerusalem and Zion *are the same*, and that they *are different* places. For this purpose we will quote some extracts from the Psalms:—

Psalm xcviii. 8; civ. 18; cxiv. 2; cxxxii. 4; cxxii. 7; vi. 5; cxlvii. 12.

Now we have in these extracts several instances of constructive parallelism, in which there is equality between the different propositions, though differing considerably in degree in each extract. Thus, take Psalm xcviii. 8, and compare it with cxxxii. 4, or vi. 5. Now, if we take a number of them like Psalm xcviii. 8, we may prove Jerusalem to be different from Zion in Psalm cxxvii. 12; and if we take several, like Psalm cxxxvii. 4, or vi. 5, we may prove Jerusalem to be Zion in that same verse of Psalm cxlvii. It is thus evident that the parallel passages also, except in special cases, are worthless so far as settling the topography of Jerusalem is concerned; and that the topography of the poetical books can only be read by the light of the historical books. It is a very important point to establish that the poetical books are unable of themselves to settle the disputed points, because hitherto much stress has been placed on the prominence given to Zion in them. It is to be observed that the passages bearing directly on the subject which were extracted from the poetical books, and of which twenty-six refer to Jerusalem, fifty-eight to Zion, and sixty-two to Jerusalem, Zion, Judah, &c., are all in parallelism.

It now remains to point out Psalm xlviii. as being perhaps an excep-

tion to the general rule, for in this Zion appears from its palaces, &c., to mean the stronghold of David, and if so we have direct proof that it stood on the northern side of the city. Another has a curious appearance. Isaiah xxxi. 4: "To fight for Mount Zion and the hill thereof."

We thus appear to have shown how up to the dedication of the materials for the Temple the praises of Zion alone were sung, and that after that time advantage was taken of the Hebrew style to parallel the present holiness of Moriah with the past glories of Zion: thus giving to the poems a strength and beauty which they lacked before.

It is to be observed that in general a preference is given to Zion, the elder city in holiness, except in the Book of the Prophet Zechariah, where Jerusalem appears to be preferred; and it is natural to suppose that Zion should in song have the preference, since not only do the prophets copy their style each from the other, thus originally deriving it from David, but Zion had of itself a more unmixed, even if an inferior, holiness to Jerusalem, for it had contained only the ark of God and the royal palaces, &c., while Jerusalem, besides containing the holy places (Zion and Moriah), was the abode of the Jebusites and other original Gentile inhabitants of the land. It is evident, then, how Zion would gradually acquire in the minds of the people a meaning synonymous with the Temple, except to those who were well acquainted with the historical books.

Having now obtained the leading features of the topography of Jerusalem from the historical books, and having seen that the poetical books can only be read by the aid of the former, we pass on to the Books of the Maccabees. We have already anticipated that the constant use of the Psalms of David would connect the name of Zion with the house of the Lord. This we find to be the case in the Books of the Maccabees, written more than 300 years after the time of the prophet Nehemiah, during which interval Jerusalem was repeatedly besieged and desolated. At this time, then, we find the city of David occupied by a foreign garrison, and still the stronghold of the city, from whence the foreign soldiers descended to molest the Jews going up to the Temple, the sanctuary now called Sion. Here we see the effects of poetry. The historical books may be out of mind, the prophets may be forgotten—but the songs of David descend from father to sons by word of mouth, and still reign in the hearts of all. Hence they call the sanctuary (though changed in position) Mount Zion.

Extracts from the Books of the Maccabees.—1 Macc. i. 33. Then builded they the city of David with a great and strong wall, &c.

iv. 37. . . . . And went up in into Mount Sion. And when they saw the sanctuary desolate and the altar profaned. . . . .

v. 54. So they went up to Mount Sion with joy and gladness, where they offered burnt-offerings. . . .

Now, crossing over to Josephus, we find the same tale of the Maccabees told in different language; but mention is not made of the

Zion of David or the Sion of the Maccabees. How could he mention them by name? As an historian he must have been aware of the identity between the city of David and Sion (his Acra), but he could not call it Zion; to do so would have caused a confusion in his story to anybody who had also access to the Books of the Maccabees: he therefore wisely left the name out altogether. Now, as Josephus describes the topography of Jerusalem in the time of Herod, and gives the position of Zion, city of David of the Maccabees, his Macedonian Acra, we have a connecting link throughout.

The point marked on the Ordnance Survey plan as Acra, the palace of Helena, appears in all probability to be the site where Zion once was, and is not; for the Hasmoneans, working night and day for three years, cut away the old stronghhold of David, and by that act destroyed the parallelism between the holy places, leaving Moriah alone to represent the abode of God's name.

When Jerusalem came under the Roman and Christian rule, and the songs of David held diminished sway, and history began to be examined, it is likely that the term Zion should again denominate the city of David; but this had disappeared, and therefore it is probable that the next hill, other than the Temple, should be called Zion; and this we find to be the case.

We have found, then, in the historical books of the Old Testament, Jerusalem, containing the city of David or Zion, Mount Moriah or the Temple, and the remainder of the city. Again, in 1 Maccabees, we find Jerusalem containing the same city of David, or the tower or fortress (ἡ ἀκρα), the same Temple, and the remainder of the city. And in Josephus we find Jerusalem containing the same Temple, and an upper and a lower city (ἡ ἄκρα); but the names Zion, Sion, and Moriah are not mentioned: the city of David is mentioned, and it will be shown that it was used to designate the lower city of King David's time, to which was joined the Akra, the citadel, and that after this circumstance the whole of the lower city, including the citadel, was called Akra. Now of the two cities, the upper and the lower, it is evident, without any doubt, that the latter, the lower city, the Akra of Josephus, corresponds to, and is identical with, the city of David, or fortress or Akra of the Maccabees, and therefore with the city of David or Zion of the historical books; but we appear to know where the upper city was, for an upper city exists at the present day, viz., the hill lying south of the road leading from the Jaffa Gate to the Bab es-Silsile, and including the Armenian and Jewish quarters, and probably also part of the hill to the south, outside the walls. We have nearly positive proof of this being the upper city of Josephus, from his statement that the palace of Agrippa overlooked the Temple, that it was in the upper city, and connected with the Xystus, and from thence by a bridge with the Temple; and in Jerusalem no other site can be found for this palace but on the high ground overlooking the southern end of the Haram area. Now, having fixed the site of the upper city, the

lower city, Akra, falls into its place to the north, about et-Takiyeh, or the palace of Helena (where is the word Akra on the Ordnance Survey plan?); for Akra could not have been south of the upper city as here fixed, and if further to the north than et-Takiyeh it would have been on the other side of the valley, and in such a position that the Macedonian garrison, quartered in it, could not have disturbed the Jews who went up to the Temple, as described in 1 Maccabees.

Now, though Josephus does not actually mention Zion, we ought, if he be an accurate writer, to be able to infer from his language where he supposes Zion to have been. In trying this and looking into the matter we find a striking peculiarity in his topography, viz., his vagueness in speaking of the topography of the past, his precision in detailing the walls and buildings which existed about his own time; this is greatly in contrast with the precision throughout the historical books and 1 Maccabees, and causes the topographical account of Josephus up to the time of the death of Simon Maccabeus to be of secondary consideration. Thus we find Josephus frequently adding to and amplifying the Biblical stories; but it does not appear in any case that he gives any help in the topography; on the contrary, he always mentions Jerusalem in such general terms as to lead one to suppose that he was himself uncertain of the identity of its various portions, as he knew it, with those which are mentioned in the Biblical account. It is, however, clear that he is in accord with the historical books and 1 Maccabees in making Zion, the city of David, coincide with Akra, the lower city:—

Antiquities, vii. 3:—"So he took the lower city by force, but the the citadel (ακρα) held out still. When David had cast the Jebusites out of the citadel (ακρα) he also rebuilt Jerusalem, and named it the city of David. Now when he had chosen Jerusalem to be his royal city . . . a royal palace at Jerusalem. Now David made buildings round about the lower city: he also *joined the citadel* (ακρα) *to it and made it one body;* and when he had encompassed all with walls he appointed Joab to take care of them."

We have, then, David taking the lower city and afterwards Akra (or in the Biblical account Zion), and then joining all in one, so that the whole lower city with its citadel took the name of Akra; but we hear nothing of the upper city. Josephus gives, however (*B. J.*, v. 4, § 1) another account, which says that David called the upper city the fortress (φρουριον); and some writers have identified the upper city, which David called the fortress, with the Akra which he captured; and in order to do this they have to conclude that Josephus gave the same denomination, Akra, to both the upper and lower cities; but if so, why does he not say that David *called* the upper city Akra?

The apparent explanation of Josephus is this: King David took the lower city with its citadel, Akra (Zion), and joined them together in one, so that together they formed the hill of Akra: afterwards, when the upper city was walled in, David called it the fortress (φρουριον).

There are many other reasons against the upper city being the citadel, the Akra, which Josephus described David as having captured. For example, he speaks of Jerusalem and the city of David as one, and of the citadel as if it were merely a citadel; but the upper city appears to be at least four times as large as the lower city, and it is absurd to suppose a city occupying one-fourth the space of its own citadel; and again, Josephus makes David join the citadel on to the lower city; but if the lower city were only one-fourth of the citadel, surely he would have said that David joined the lower city on to the citadel. Then, again, Josephus appears to call the lower city Jerusalem, the city of David, and he says David built his palace there, and made buildings round about it. It thus appears that Josephus, though speaking more vaguely, is strictly in accord with the historical books and the 1st Maccabees. The only question that appears to remain is a question of degree: whether the citadel, Akra, which David captured, is not Millo of the city of David, and the lower city of Josephus Zion. As Akra was taken in and formed one with the lower city, so Millo may have been taken in and formed one with Zion.

Let us now pass on a step, and test Josephus as to the topography of his own time or a couple of centuries before it, viz., from the death of Simon Maccabeus; for it appears that it is only after that time that he can be looked up to as chief and almost the only authority. We now find at once a change; he is no longer vague and general in his remarks, he is master of the field, and must write with precision, not only because he is almost the only historian of his time, but also because he is speaking of a city the topography of which was known to himself and to many who were likely to be his readers. We may, then, suppose that Josephus's account becomes valuable just when it is most wanted, viz., after the death of Simon Maccabeus.

Looking at Jerusalem as it is, we find Robinson's Arch to have been a portion of a bridge leading from the Temple to the foot of the upper city. How exactly this coincides with the account of Josephus, when he tells us of the bridge leading over to Agrippa's (or the Hasmonean) palace through the Xystus. It appears probable, then, that Robinson's Arch was used in the time of Herod and destroyed after the taking of Jerusalem by Titus; and if so, when was the bridge broken down in Pompey's time? It is to be recollected that it was not till Herod's time that the Temple area was expanded to double its previous extent; and in looking for an area 600 feet square, no site can well meet all the requirements but that nearly coinciding with the platform of the Dome of the Rock, though even this site does not seem quite to suit the historical account. There appears, however, to be the fewest objections against this site. If this is near the site of the old Temple, then the bridge of Pompey would have been near Wilson's Arch in the lower city.

Now it has been stated that Robinson's Arch appears to have fallen before the first of Wilson's Arches was built; therefore it appears that

this latter arch was built *after* the destruction of the Temple by Titus. We may look, then, farther north for the bridge of Pompey, perhaps near the Bab el-Kattanin. It has also been surmised that the Haram Wall from the Huldah gate round to Barclay's gate is more recent than that about the south-east angle.

We now appear to have got hold of some pieces of the puzzle, viz.: that the first Temple may have been situate at the south-east angle of the Haram area, or more probably nearly on the Dome of the Rock platform; that a portion of the present wall was probably not built till Herod's time; that Wilson's Arch was not built till after the destruction by Titus; that the bridge destroyed in Pompey's time may have been near Bab el-Kattanin; and, to finish up for the present, we have the suspicion that the valley running down from the Damascus Gate may as well run across the northern portion of the Haram area as down under Wilson's Arch. It is not at all certain that it does do so, but there is nothing that we know of against it; and, whether it does or not, the valley up by Bab el-Hadid appears to be what the Bedawin call a *thoghret*,—that is, a point where a water-course, after having passed down a valley, is undecided which of two fresh valleys it shall follow. It is not an uncommon feature in Palestine; and it appears that cases are on record in other countries where running water, on coming to a *throghret*, bifurcates and passes on in a double stream.

The question of the course of this valley has a most important bearing upon the position of the Antonia. Josephus tells us that the Antonia, or Baris, was at the north-west angle of the Temple. We also learn from the 1st of Maccabees that there was a fort attached to the Temple. There is no reason to suppose it was a mere tower, and possibly it was the fortified palace spoken of in the Book of Nehemiah. The question is, whether it was joined to the Temple directly, or by cloisters, which could be cut off without injuring the Temple or the Antonia. The latter appears probably to have been the case; but it is a question which requires much looking into.

Now, Josephus tells us that the Antonia was on Bezetha, and separated from Bezetha by an artificial ditch. If it were joined directly to the Temple, it would have been near Bab el-Hadid; the valley in front being the artificial ditch. There are many reasons, however, against this, and in favour of its having been at the north-west angle of the Haram area, where the Seraï is now, and joined to the Temple by cloisters running across the valley which separates Bezetha from Moriah, which valley was pointed out in my letter to Mr. Grove of Nov. 12, 1867. This appears to be the great question at present. A few innocent-looking little shafts in the grass-grown, unfrequented portion of the northern Haram area would probably settle the matter; but, alas! it appears that we are to be debarred the satisfaction of obtaining a plan of ancient Jerusalem for our Biblical history, merely because a confusion has been made between the Haram area at Jerusalem, and the more jealously-guarded Haram at Hebron.

CHARLES WARREN, Lieut. R.E.

NOTES.—GOLD IN PALESTINE.

Note furnished by the Rev. Greville J. Chester.

THREE years ago, when I was at Samaria, a poor peasant brought a nugget of native gold for sale to my dragoman. The bargain had not been concluded on my coming up, and, seeing me, the man at once doubled the price he originally asked. I therefore did not buy it, which I have since regretted. The nugget was about an inch in length, and nearly pure. The peasant stated he had found it in the neighbourhood, and it certainly was an unlikely thing to have been dropped by any passing traveller. The fact, at all events, is worth recording. It is hard to understand how gold could be found amidst such recent geological formations. Could it have been originally contained in a boulder?

September, 1869.

A SINGULAR CUSTOM.

Extract from Journal in Palestine of G. Octavius Wray, Esq.

OUR quarters for the night are a family dwelling-house, consisting of one chamber some 30ft. square, with dome roof of solid masonry; on one side of the room is a raised floor of 10ft. in breadth, with a wood fire under an insufficient chimney. Besides this and the closed door there is no other opening. The inner boundary of the daïs is a wall of clay, 6ft. high, with hollow places filled with wheat and barley—the family granary. On the floor of the daïs sleep the grandfather, or patriarch, and his family of children and grandchildren, male and female, some eight of them, under a vast blanket. That this custom is ancient is shown by the plea of the lazy man in the parable, "My children are with me in bed; I cannot arise and give thee."

The lower part of the house contains our four horses, the syce, and an unknown number of cows, goats, and barndoor fowls. The first cockcrow approaches, and within three minutes of midnight, by my watch, the cock flaps his wings, crows lustily, and so rouses the family, who come and crouch round the fire, except the old woman, or Surah, the princess of the tribe, whose privilege it is now, as it was when Abraham entertained the angels, to make the cakes. She takes from a recess in the wall her kneading trough and meal, and kneads the dough at the head of my bed; next, puts it into a large round flat basket, together with a small earthenware lamp, placing the cover of the basket over all. She then stalks forth into the darkness, with the light streaming through the wickerwork, to get the cakes baked at the village oven. Presently she returns; the family eat, drink water, talk, and then to bed again, none of them having offered to assist the old woman in her labours from beginning to end.

SINGIL, *March* 17, 1863.

REPORT OF ANNUAL GENERAL MEETING,

HELD AT WILLIS'S ROOMS, ST. JAMES'S, 24TH JUNE, 1869,
HIS GRACE THE ARCHBISHOP OF YORK IN THE CHAIR.

THE CHAIRMAN.—I have received letters expressing regret that the writers are unable to attend this meeting, on account of other pressing engagements, from the Duke of Argyle, the Earl of Carnarvon, Lord Dufferin, the Bishops of Oxford and Peterborough, Mr. Layard, Sir Moses Montefiore, Mr. Beresford Hope, Mr. Fergusson, the Rev. John Stoughton, and others. I will call upon Mr. Grove to read the report.

Mr. GROVE, honorary secretary, read the report.

The CHAIRMAN.—It is incumbent on me to say just a few words on the subject of the operations of the Fund; and the great difficulty a speaker like myself labours under is this,—that among those who will follow me are five or six speakers who have visited the spot, and with their own eyes witnessed the scene of our operations and our success, and know what can be done better than I can describe it. I will therefore confine myself to one or two quite general remarks, and I will first ask the sympathy of the meeting for the peculiar difficulties which beset this kind of undertaking. It is, from the very nature of it, extremely costly. You have heard that the staff at present employed costs £100 a month, and that the labourers necessary to work under that staff cost £200 a quarter. The operations are all of the nature of mining, and those who will make any inquiries as to the details of a mining exploit in this country, will find that a great deal of money is sunk for small results, and often no results. Here, however, there is a certainty of results. But that brings me to the main difficulty with which this undertaking has to contend. We must not expect to find an old city buried unchanged under a new city. Jerusalem, almost more than any other city on the face of the globe, has gone through great changes. I ran my eye this morning over its history, and I think I counted more than twenty sieges, great and small, which within historical memory that city has sustained, and more than one involving something like a complete overthrow. The results of that are two. In the first place, the facts we are in search of lie deeply buried under the soil; but, in the second place, there is abundance of evidence lying there for us as soon as we can reach it. Startling and great results, perhaps, we must not expect to find. From that report, if you have listened to it—and it is worth while to examine it carefully afterwards—you will see that there are a great many points, each not startling in itself, but which, when put together, will lead, when completed, to a reconstruction of the map of Jerusalem, and to a much greater knowledge than we ever possessed of what the ancient city really was. There is in this country so great an interest in Bible study, so eager a thirst for every fact that throws light upon the pages of the Old

Testament or the New, that I cannot think this undertaking will be suffered to drop through for want of sufficient funds, even though the demand made upon it may seem to be very large. I admit that £5,000 a year sounds a very great sum to be spent without producing any tangible result, though spent with the certainty that in the long run complete results will be obtained. I admit the sum is large; but, on the other hand, the wealth of this country is so very great, and so many persons in this country could, even single-handed, sustain the whole cost of this measure, that I cannot believe we shall be allowed to drop this exploration for want of funds being supplied. I think, as we go on, we may hope to awaken a greater interest, as our results grow greater and brighter than any that have yet been shown in the proceedings of this Fund. (Hear, hear.) It is most remarkable to think what a fascination that little and peculiar country has exercised for centuries and centuries upon the whole world. We look on Jerusalem now—we English people—as a city that in some measure belongs to us. Do we not every year pour forth in thousands the documents that attest its history,—do we not pour forth in thousands and tens of thousands that sacred Book wherein is written its rise and its fortunes and its fall? May we not naturally say, when we are so largely occupied in spreading its history, that we have in some measure made it our own? This country is the cradle of our religion; it is the source of light from which it pleased the Almighty to send forth spiritual light and life to our souls. It is a country, I am told, now barren, desolate in many parts,—a country little blessed with the advantages of government and civilisation which we enjoy; but yet it is a country which has been blessed in our estimation above all the countries of the world; and the mode in which it has been blessed connects it directly with us—it is with the history of that country, and with what was done upon its soil, that our hopes of salvation have been knit up. (Cheers.) I therefore commend to you this undertaking. I commend it to those, whatever be their creed, dwelling in this country. Be we Jews, or Anglicans, or Dissenters, we have for different reasons one common interest in this country, and therefore ought to join with one common sympathy in this undertaking. (Cheers.)

Mr. Morrison then read the Treasurer's report.

On concluding the Report he called attention to the fact that the exploration expenses, *i.e.*, the expenses of the party in Jerusalem, absorbed three-fourths of the money spent during the last year, while the printing and postage took one-eighth; rent and salaries taking no more than one-twentieth part.

Mr. Deutsch.—The first resolution is, "That this meeting, having heard with satisfaction the progress made during the past year, desires to record its sense of the energy and ability which Lieutenant Warren has shown in conducting the excavations, and earnestly hopes that he may be enabled to continue them with success." (Cheers.) After the able Report of your Honorary Secretaries, and after the eloquent words

spoken by our Chairman, this resolution, the moving of which has been entrusted to me, seems so self-evident and so obvious that it would be almost superfluous to add one word to it. Nor shall I go into a detailed technical account of those shafts and galleries and tanks and aqueducts, as I have seen them but a few weeks ago. I am not learned enough in these matters, and there are those eminent men of the craft who will follow me, and will explain in detail what the work consists of. But I will tell you this one thing, that if you had stood, as I have stood, within the labyrinthine mazes of underground Jerusalem, and seen those stupendous works disclosing themselves before your eyes, you would indeed have felt, as I have felt, a thrill running through you which would have obviated all further pleading for this undertaking. For let us not disguise the fact from ourselves that we are *pleading*. The undertaking inaugurated under such exceptional auspices—started with the proudest muster-roll of this country,—an undertaking which has already, not merely here, but abroad, not merely in the East, but all over the West, attracted universal attention and universal interest,—an undertaking which seems to have united in one common bond all creeds and denominations, of Christians, Jews, and Mahomedans,—an undertaking, not started by any government, but by the spontaneous and enthusiastic free offerings of the people,—this undertaking, I grieve to say, is flagging. While I was in Jerusalem the order came out that half the already trained workmen—and I need not tell you how difficult the training of them was—(Hear, hear)—workmen, by the way, among whom there were Jews, Mahomedans, and Christians, all eagerly looking forward to results, all eagerly speeding their work—that at least half of these men were to be dismissed; and the works themselves, Lieutenant Warren was told, were to be confined to those portions only which it was absolutely necessary to work. Moreover, certain shafts which had been sunk in a certain place of the Haram Wall, where, as you know, there are certain very curious and interesting marks: these shafts were to be removed. And why? On account of the expense. (Hear, hear.) These marks themselves were thereby, and are thereby, endangered for ever. I have asked repeatedly, How is it that an undertaking started under such auspices, and accompanied with such enthusiastic wishes, should not be carried on in a proper way? and the answer I have heard on various sides was this,—that the results hitherto achieved have not corresponded to the expectations. Now I would fain ask these people what their expectations were. (Hear, hear.) You remember well when this Fund was started it was questions of archæology, topography, geology, and natural history in general, that were to be solved, and some of which have been solved. If people expected to find the legendary golden throne of King Solomon, with its eagles, and lions, and doves, they have been disappointed, and I am afraid they will be disappointed. (Hear, hear.) If the crowns and sceptres of the kings of Judah and Israel are the things they look for-

ward to, they will not find them. But certain things have been found already, and they are most valuable in their way. It is, indeed, one of the very tests of science that it does not work by starts and by jumps, but slowly and silently—stone laid upon stone, layer reared upon layer, till the proud edifice stands reared up a joy to all beholders. (Cheers.) You are not wreckers, you are explorers. Let me remind you, among other things, of that greatest and most precious Semitic memorial now extant, which has come down to us from Phœnicia. You know that for generations and generations small things were found in the Phœnician colonies—in Greece, Asia Minor, Spain, Malta—votive tablets and funeral tablets, and the like smaller things, with scanty inscriptions, but nothing had ever been found in Phœnicia itself. And many were the reasons given, at least by the learned, for the utter absence of monuments on the soil where they were most to be expected. What happened? By the merest accident, the merest chance, about fourteen years ago, there was suddenly found—not in a mausoleum, not in a cave, not in a place where people had been searching for a long time, but on the open ground almost, in a field close to Sidon—a sarcophagus—the sarcophagus of Ashmunazar—the most valuable piece of Phœnician antiquity that has ever been found, seven feet by four, with twenty-two lines of a most beautifully cut inscription running round the chest, and seven other lines running round the back of the head. And what did the inscription say? Most touching in its way, reminding us of the dire lament of Hamlet's father, this Ashmunazar, King of the Sidonians, bewails a dire fate, how that he, the son of the flood of days, is "stolen away before his time." And what does he impress upon all those that would come after him? "Search not with me for treasures," he says twice. But this very sarcophagus is the greatest treasure that could be found. (Cheers.) In the same way we should tell these people who look for some very startling find, which—it is by no means beyond the reach of possibility—*may* come to light, that to this day, already, certain things *have* come to light which not merely justify all the labour that has been spent already, but warrant the expectation of future results of no small import. (Cheers.) Most of you probably have seen those things which are now exhibited in the Biblical Museum. There are certain fragments of pottery which, perhaps, may not have attracted your attention much. But if I tell you that these broken bits of pottery are very similar to those found at Mycene, at Tiryns, in various tumuli of the Lake of Gyges, at Sardis, in the island of Meoos, in Rhodes, in Cyprus, Santorin, and at Nimroud, you will understand how necessary it is, and how valuable it is, to search for further pieces and fragments of this same kind; for it is only by a comparison of all these bits that we shall come to understand the history of Phœnician art and commerce, and the influence these bear upon the arts of the Israelites of Palestine. (Cheers.) Fragments of glass of a very peculiar kind, inlaid and variegated, have also been found. This, again, is emphatically Phœnician. We find the

exact counterpart of it, not merely in Asia Minor, notably in the tombs of Camirus, but in Egyptian tombs as early as the date of Thothmes II. Then there is that breast-shaped stone weight, precisely like those found, singly and in pairs, at Cnidus and other ancient settlements. I shall not deny from you that all the things in this collection are not of equal value. Far be it from me to bespeak equal attention for them all; but to every one of these chips found in the drift there attaches a special interest, an interest hallowed by feelings of reverence and sacredness. (Cheers.) I shall not detain you any longer. All I wished to impress upon you, coming fresh from your field of action, was that you must not be disappointed if the results have not been of a startling kind, and, further, that you may be encouraged to proceed with your work. I, as a humble votary of science, would, in the name of science, urge you to continue that in which both religion and science may join. (Cheers.) And let me remind you of one thing. There are ruins enough in the City of Sorrows. *Do not add fresh ruins.* Do not leave there broken shafts, abandoned galleries—(cheers);—and let it not be told in Gath that this England, the richest, proudest, and most Bible-loving country in the world, undertook one of the greatest undertakings, and abandoned it—for want of money. (Loud cheers.)

Mr. Newton, in seconding the resolution, said:—There is a point of view in which I may be permitted to regard this expedition which perhaps has not yet struck you. I have followed the course of Lieutenant Warren's researches with the greatest interest, particularly his topographical researches, for I feel the greatest desire to know the true position of the Temple and its surrounding court. But there is another hope that I have never lost sight of, which is, that in the course of these topographical researches we shall come upon some vestiges of Phœnician art. And when I say Phœnician art, I have only to remind you that the cunning artificers employed by Solomon were Hiram of Tyre and such men. And I think we may assume that those wonderful works in metal, stone, and other materials which we have so graphically described in the Old Testament as the ornaments of the Temple of Solomon were examples of the Phœnician art of that time. It would be, I am quite sure, to all I have now the honour of addressing, a point of extraordinary interest if we could see any one specimen of the art of Hiram and his fellow craftsmen. (Cheers.) I am very far from hoping that we shall find any of those richly wrought works of metal in the precincts of the Temple itself, but there are things which neither Roman, nor Crusader, nor Turk could ever have touched, things that did not excite cupidity or fanaticism, and which all of these would have passed over without attaching any value to them,—such things as the pottery which my friend Mr. Deutsch has just mentioned; and I cannot but believe that if you steadily pursue these topographical inquiries, and follow out these shafts and galleries, you will come unexpectedly to vestiges of early times, strangely intermixed with vestiges of Crusaders, Turks, and

Arabs, and modern things. These are the experiences which all persons connected with excavations make for themselves. I can give you some little hope that we shall arrive by slow induction at the character of Phœnician art, not only from this exploration, but from other sources. The first process, in looking for Phœnician art, would be to look for it in Phœnicia and in Palestine itself. That, however, has not been the course by which we have discovered it. We have discovered antiquities in the Greek or Phœnician settlements in Syria, and in Phœnicia itself other antiquities, almost identical in character. This is not an occasion to give a lecture on the subject, but I may give you this as an example of what may be discovered. There is in the British Museum a large shell called *tridachna squamosa*. It was found in a tomb of Etruria thirty years ago, covered with engraved ornaments of Assyrian character. This was shown to the Roman Institute, but no person could make any kind of explanation of it, and it remained an unexplained antiquity. In due course Mr. Layard went to Nimroud, and there he found a fragment of a different shell, similarly engraved. Mr. Loftus afterwards in the same locality found another shell, with ornaments similar to those on the Assyrian friezes, such as flowers and winged monsters. Some ten years after that we made that interesting discovery of the Necropolis in Rhodes, a Græco-Phœnician settlement, which I discovered, merely from finding some fragments of pottery on the surface of a ploughed field, and where many hundreds of tombs have been explored by our Consul, Mr. Biliotti. Here, too, another fragment of this shell was found, similarly engraved. And now I must tell you that this shell is not one of the Mediterranean shells at all, it is generally found in the Red Sea and in the Indian Ocean. Therefore, *a priori*, the presumption is that it is a Phœnician shell. The ornaments were thoroughly oriental, and gave rise to the same presumption. And I hope to see the day, and I think it is not a rash hope, when we shall have explored and preserved the Phœnician and Græco-Phœnician antiquities from Tyre to Gades, throughout the length and breadth of the Mediterranean. (Cheers.) But, to make the induction complete, we must have carefully preserved all the Phœnician antiquities found in Phœnicia proper, and in Palestine. I would add one word for the Phœnicians themselves. I venture to think they are to us a nation deserving of peculiar interest and study, not merely as the kinsmen of the Jews, but as the nation to whom we owe what is perhaps the greatest instrument of modern civilisation, greater than printing, greater than railways, greater than the electric telegraph; I mean the invention of a written alphabet such as we now use, such as the *Times* newspaper was printed in this morning, and which we may trace without any doubt, through many changes, to a Phœnician source. (Cheers.) I have no right to detain you any longer; but having been an excavator myself, and having passed seven years in the Levant, I know something of the difficulties, the expenses, and the heart-breaking disappointments of such expeditions as this; and I must say that, from what I can judge of the reports

of Lieutenant Warren and his companions, and from the care that I see they have bestowed in keeping a register of every fragment they have found, they appear to have done their work in a most conscientious and thorough manner. (Cheers.) And I say this with the less reserve because I have not been in any way engaged with the management of this expedition. (Cheers.) I will add one word more. It is clear that these kind of expeditions cannot be carried on without great outlay. Remember that you are carrying them on in a country where there are none of the appliances of European civilisation; where there is no proper timber, except such as you import from Malta; where everything is carried on mule back or camel back, adding greatly to the expense; where there is no wrought iron and no machinery; and, moreover, that Jerusalem is at a considerable distance from the coast. (Cheers.) I was enabled to conduct an expedition with the aid of an officer of engineers and sappers, and with stores from the War Office, and a great many other things which the Government were good enough to give me; but I had one advantage besides, I had the sea at my back and a ship of war as a base of operations, and when anything was wanted it was easily fetched from Malta. But here we have to add on to the cost of the excavations the further outlay of the cost of transport from the coast to Jerusalem, and that, no doubt, is a large item. I would say one more word with reference to the necessity, the absolute necessity, of giving subscriptions liberally and quickly. (Cheers.) There is an old Latin proverb, that "he who gives quickly gives twice." (Cheers.) There never was a case in which that was more applicable than this. The Turkish Government, in regard to giving firmans for this purpose, is, considering all things, a very liberal government. (Cheers.) I will say this, if Jerusalem passed into other hands, it is my belief that you would never again find a government more liberal or more disposed to give you free scope in these researches than the government with which you have now to deal. And if you have not at once overcome all their prejudices, which, it must be remembered, are *religious* prejudices, I feel assured that in time they will grant you much more than they have done as yet. (Cheers.)

The CHAIRMAN put the resolution, which was unanimously carried.

Professor OWEN, in moving the second resolution, said:—Some years ago, indeed on the first occasion on which we submitted to the public the aims and needs of the Palestine Exploration Fund, through an audience, in numbers, influence, and social status, like that which I have now the honour to address, it was assigned to me to advocate more especially the interest and importance of acquiring a precise or scientific knowledge of the natural history and geology of the Holy Land. The British public, I am happy to say, and indeed, as you must have gathered from the report just read, and the excellent opening address from the Chair, have responded to our appeal with a degree of liberality which has enabled the Committee to carry on researches on the Antiquities of Palestine, which have resulted, as has been lucidly

set forth by my accomplished colleagues in the British Museum, in discoveries of greater extent, originality, interest, and instructiveness than the sum of all the similar researches which had been recorded prior to the establishment of the Palestine Exploration Fund. This is a great though not an unexpected result: it was foreseen, anticipated, on good and sure grounds, by the Committee and founders of the Fund. It was very unexpected, I believe, by the public at large; and I may say, I believe with strict truth, that it has brought intelligent sections of knowledge among our Christian brethren into a clearer comprehension of the present state of the Jerusalem of Holy Scripture than they before possessed. To achieve the work productive of this valuable and much coveted result, however, has necessitated the exclusive, or almost exclusive, application of the funds at our command to this, which was judged, and I willingly admit it to be, the primary and most important aim of our association. I am here, therefore, after a lapse of two years, again before you to press upon your favourable attention and liberal instincts the great desirability of providing the means of carrying on researches requisite to lay the foundation at least, and I trust ultimately to raise the superstructure of a truly scientific geology, zoology, and history of the Holy Land. Most singular and peculiar characteristics of the land—I need only instance the "Dead Sea," a sea standing at the lowest level of any known on the whole world—invite to geological research, irrespective of associations with our religion. In that latter relation dread and potent geological dynamics, alluded to and more or less distinctly shadowed forth in Scripture as being attended with destruction of cities, and wholesale blotting out of human life, may reasonably be expected to have left traces of their operation which a skilled geological explorer can alone be qualified to satisfactorily detect and define. The general geological study of Palestine must and will be accompanied, as in all other parts of the world, with the discovery of fossil remains. These petrified evidences of the plants and animals of a former condition of mundane surface, must be collected with due care, and the annotation of all requisite particulars as to locality, geological formation, mineral condition of their place of entombment, relative position to present surface, and so on, such as the competent palæontologist and collector will necessarily note down and record. The fossils must be suitably prepared and carefully packed, and transmitted to the British Museum, where alone, so far as I know, exist in this country the means and materials for the comparisons essential to their accurate determination. We ask for funds to enable us to effect this good work, to complete this remarkable chapter in the Natural History of Palestine. Of the plants and the animals of the Holy Land what shall I say? what need I say? It is familiar to readers and students of Scripture—it is known, indeed, to us all—how numerous, how various, were the comparisons and similes with which the Divine Author of our faith elucidated and enforced his teachings. Phenomena above, beneath, and around him were recalled to the attention of

his auditory, and pressed into the service of the parable or other form of warning, advice, command, and instruction. The grain of "mustard-seed," the "fig," whose tender budding leaves foreshowed the summer, the "sparrow" in the house-top, the foxes which have their holes—why need I, before you, who know doubtless more and better instances than I can recall to present memory, adduce further evidences of the peculiar relations and conditions that render a natural history of Palestine, which may be called a natural history of the Bible, a subject of deeper interest to Christians than any other fauna and flora, or geographical field of natural history can possibly be? It has sometimes been wished that, pending the accomplishment of this work, the translators had been content to leave the Hebrew, or other original name of plant or animal, untranslated into our vernacular. We appeal to you for aid by subscriptions, to enable us to place this fair crowning stone on the edifice of the History of Palestine. Does not a full and true Ichthyology of the Sea of Galilee, the Lake of Gennesareth, come home to the student with an interest greater than can relate to a like knowledge of the early inhabitants of any other waters? We appeal to you again, therefore, to continue your kind co-operation with us, and help us by your contributions and canvass to get the means for carrying out the part of our programme set forth in this second resolution.

Professor Owen then moved the second resolution, "That it is desirable that special exertions should be made to raise funds to enable the society to complete the survey of Palestine, and to make further researches into the geology and natural history of the country."

[During Professor Owen's speech His Grace the Archbishop of York left the chair, which was taken by Mr. Morrison, M.P.]

The CHAIRMAN: I will call upon Mr. MacGregor, Captain of the "Rob Roy" canoe, to second the resolution. (Loud cheers).

Mr. MACGREGOR: Mr. Chairman,—This work will give us plenty to do for a long number of years, there is no disguising that, and for many men, many kinds of men, and many kinds of work. Yet the country where we are doing it is a very small one. Palestine is not larger than Lancashire and Yorkshire together, and surely it cannot be beyond our power to make everything clear in such a space as that, when we can send out expeditions to the North Pole, and cut an ocean canal between two great seas, or bridge with a railway the whole continent of America. Jerusalem itself would all go into Hyde Park, as the labours of General Lefroy will enable us to see. And to let you see it here I have got a map to-day of London, and have stuck a pink mark upon it of the size of Jerusalem, that you may all see and judge for yourselves the smallness of the town. Now this is laid down with some care, and if you will take the tickets of admission to this meeting which you have, and which have upon the back of them a map of Jerusalem, I will explain to you the principal features of the place, and their relation to the positions of the most remarkable places round about us here. If

you will turn the tickets upside down, then, as you are sitting, you will be in the same position as this map is, as I hold it up here. Jerusalem is here represented in such a way that *this* is the Haram area, and to show the boundaries of Jerusalem it extends along the side of Piccadilly, and from Devonshire house it reaches to the Alhambra. Then the east wall of Jerusalem passes down past St. Martin's Church until it reaches the Charing Cross Railway and gets into the Thames, then it goes past the Houses of Parliament to Westminster Abbey, and goes across the bridge over the water in St. James's Park, and gets across Piccadilly to Devonshire House. Now the boundary being such as that, I will name some of the places in that space here which fall on the particular parts in Jerusalem. We are now sitting here in such a spot as would be north of the Haram area, at no particular place except a heap of rubbish. The Mosque of Omar would be represented by the Junior United Service Club, the Golden Gate of the Temple would be where the Quadrant is, the Mosque Al Aksa would be at the Alhambra, Robinson's Arch at Nelson's Column, the Tower of David at the Duke of Buccleuch's House, and the Jaffa Gate at the pier where the penny steamboats start. Then the Pool of Bethesda would be about the top of Duke Street, St. James's, the Tyropœon Valley at Pall Mall, Zion would be about Whitehall, and the Holy Sepulchre where the new Foreign Office is. Round about Jerusalem there are four or five places I may mention. The Garden of Gethsemane occupies a site which would be represented by Clifford Street, the Mount of Olives by the Regent Circus, the Tombs of the Kings would be at Victoria Station, and the new Russian Hospice, which dominates Jerusalem on that side, would be about the Westminster House of Correction. Now with such a small town as that, and with so many people about it, we ought to be able to finish the work. But that matter has already been pressed upon you. Every one here has contributed, and will perhaps contribute again; but we can do a great deal by talking to our friends. And besides our taking an interest in this, and besides our signing cheques for this, we can do something even as travellers in the country itself; and you have the benefit in this Society of getting information, which costs you nothing, from those travellers who are able to go out at their own expense, and such travellers are adding very much to the knowledge that could not be obtained except by costly and painful investigations. I have, during the last winter, been doing what could not be done except in a boat. (Cheers.) Of course I am not going to enter into the subject of that journey now, interesting as it was to myself, and useful as it may perhaps be to others, but I may mention one point in which the boat was of use. I was ten days on the Sea of Galilee. When I came to the town of Tiberias there were crowds of people on the shore gazing on me, and as I was looking on them I suddenly observed a long sea wall, just above the surface of the water, and on observing it I found that it seemed higher at one end than the other. It was 300 or 400 yards in length. You could not see it from the shore, but you

could look at it from the water, and it was evidently higher at one end than the other. I thought that worth examining, and what did I find? I found this old wall underneath other walls, and there were three courses of stones out of the water at one end and only two at the other, and it was clear that it had all bodily sunk: the whole of this range, the whole of the town of Tiberias, had lowered towards the south. Now that shows that the earthquake which took place in 1837, and was the cause of this sinking, had an effect of one particular kind, and in one particular direction. How valuable that is, how important. (Cheers.) You could go along the whole course of the lake, and trace out at the depth of six or seven feet all the submerged columns entirely covered with water. I mention that to show how the catastrophes of nature may sometimes be detected from the water when they may not be from the land. (Cheers.)

Mr. MacGregor concluded by seconding the second resolution.

Captain Wilson, R.E., in support of the second resolution, said:—In rising to support the resolution which has been proposed by Professor Owen, and more especially that portion of it which relates to surveying, I will simply mention what has been done in Palestine. We have now a survey of Jerusalem and the country round it, and the Sea of Galilee, and the district round the east of Jordan has been lately done by Lieutenant Warren; and lately, this last winter, a large portion of the peninsula of Sinai has been surveyed. But we want to complete this work. There is a large district called the Desert of Tih, in which the children of Israel spent the greater part of their forty years' wandering, which requires attending to. Then there is the home of the Patriarchs: that country is absolutely unknown, and is seldom traversed by travellers. In making a survey of a country, it is not merely mapping that is done, other things are carried on. For instance, when I was at Bethel I found a church almost on the identical spot where Abraham and Lot viewed the country round. There could be no doubt about the place, because it was the only hill-top from which the view described in the Bible could be had, looking down upon the Jordan Valley. Then, going further north, to Nablus, I was enabled to make a plan of one of the most curious natural features in the country, the spot where the meeting of the Law took place. The place was remarkably suited for what took place. There was a large amphitheatre formed in the side of the hill by lime-stone cavities, and, as we are told, one-half of the people stood over against Mount Gerizim, and half of them over against Mount Ebal, and Joshua and the Levites stood in the centre of the valley. Then, again, we found out many new facts with regard to the site of Capernaum, and the system of irrigation adopted in the plain of Gennesareth, by which water is carried by an aqueduct for a distance of many miles. We also made an excursion on the east side of the lake, and identified the ruins left by the ancient Ghirgesites. It was a great satisfaction to me on my return from Sinai, and on meeting the captain of the "Rob Roy," to find that the only alterations he was able to make

in my survey of the Lake of Galilee was owing to his having visited it at a different time of the year, when the water was much lower. It was gratifying to me that such a careful observer as Captain MacGregor, of the "Rob Roy," should only be able to make such trifling alterations. (Cheers.) I cordially support the resolution. (Cheers.)

Dr. William Smith moved the next resolution, "That it is desirable that Local Associations should be formed in the principal towns in England to further the objects of the society."

The Rev. W. Holland, Honorary Secretary, seconded the resolution:—Owing to the absence of Canon Birch, who has had to leave the meeting, the duty falls to me of seconding this resolution. I was particularly anxious that Canon Birch should have seconded it, because he is connected with one of our local committees, and a committee which I hope will prove the most important of all—that is, the local committee at Manchester. (Hear, hear.) We have already received very much assistance from various local committees, of which we have now a good many in various parts of the country, and we are greatly indebted to those gentlemen who have kindly taken up the question, and endeavoured in different towns and counties to make known the objects and operations of the society. I have been astonished to find how little people realise what we are doing. Some people look upon us as merely archæologists, and others as merely geographers. Now I do not wish to underrate at all the value of archæology or geography, far from it, but I wish to call your attention to the fact that we are still more than that. *We are illustrators of the Bible.* (Cheers.) That is the great object we have in view, and that is our great claim in coming before you for your support. (Cheers.) We find that to carry on our explorations satisfactorily—that is, with regularity and system—we must have an annual income; and that *ought* at least to amount to £7,000 or £8,000. Now, so far, our existence has been one rather of beggary; not that we have ever actually been short of money, except for a short time, but we have had from time to time to issue a pressing appeal for funds, and then our funds have been spent, and after a time we have had to issue another appeal. But now that our society is more firmly established, we ought to exist in a more satisfactory condition. (Cheers.) We ought to have an annual income, and we have come to the conclusion that that annual income can only be obtained through local associations. We therefore appeal to you, and to all who take an interest in the subject, to help us in forming throughout the country a number of local Associations. I would remind you also that this work is not a work merely for ourselves. It is a work which I hope will benefit not only the whole of our own country, but I may add the whole of mankind. Nothing can exaggerate the importance of enabling people to realise the country, and the manners and customs of the country, which is described in the Holy Scriptures; and I often think that perhaps the operations that we are now carrying on may actually prove in future time to be of more

importance than we now think. (Cheers.) There is no knowing what the importance of the discoveries we now make will be. And I would call your attention to the fact that although the present security of the country, and the better government, enables travellers to travel through the Holy Land more safely, still that same security does to some extent endanger the treasures which exist there. I refer to this fact, because the security of the country has caused an increase of agriculture, and has consequently caused an increase of lime kilns; and some of the most interesting things that Captain Wilson discovered have now, I believe, been turned into lime. I believe that a portion of the synagogue at Capernaum, which was possibly the very synagogue in which our Lord preached, has been converted into lime. It is important, therefore, not only to have funds to discover these things, but to secure them, and to bring them home, that they may be useful to us and to all succeeding ages. (Cheers.) I would say a few words about the interest which is taken in our work abroad. Not only have we many friends in Germany, but we have many letters from America, and we hope in a very short time to have local associations in America, such as we wish to start in our own country; and possibly the different societies may so join hand in hand that we may complete the explorations we have commenced, and finish that work which if not now secured may be destroyed for ever, and thus enable us to realise our Bible, and be of permanent usefulness to us in that way. (Cheers.) And I would call your attention finally to the fact that we ought to regard the explorations in Palestine as a religious duty. I am not saying too much when I say that the illustration of the Bible is so great (and those who have been in Palestine will bear me out when I say so) that we ought to look upon this work as a religious work, and one which can claim, and ought to claim, larger support than it has at present received. (Cheers.)

The resolution was carried unanimously.

Mr. FREELAND: Ladies and Gentlemen,—The Chairman has placed in my hands a resolution which I have very sincere pleasure in proposing for your acceptance, because it is one which I am quite certain you will receive with very great cordiality. It relates only to a vote of thanks to the Archbishop of York, as it has been placed in my hands; but I think I must venture to supplement it to a slight extent, and therefore it will run in this form,—"That the best thanks of the meeting be given to his grace the Archbishop of York—(cheers)—and to his successor in the chair—(cheers)—for their kindness in presiding over us on this occasion." (Cheers.) At this late hour of our proceedings, it would ill become me, especially after you have had the advantage of hearing many gentlemen who possess what I do not possess, a local knowledge of the country to which our explorations extend, to detain you with any lengthened remarks. I would only ask to be permitted to say that it is to my mind, as I think it must be to the minds of all present, a matter of very sincere congratulation to think that a society of this character, which has nothing about it of a sectarian or de-

nominational description, but which has united in its operations the efforts of the Jew, the Mahomedan, and the Christian, can be on an occasion like the present presided over and commended to our sympathies by an Archbishop of the Church of England. (Cheers.) I shall say no more in asking you cordially to adopt the resolution which I have the honour to propose to you. (Cheers.)

The resolution was seconded by Mr. FRESHFIELD, and unanimously carried.

The CHAIRMAN: I have only, ladies and gentlemen, in the name of the Archbishop, to return you the thanks which he of course would have returned you for this compliment.

The meeting then adjourned.

METEOROLOGICAL OBSERVATIONS TAKEN AT BEYROUT, SYRIA.

(*Latitude* 33° 54′ *N.*; *longitude* 35° 29′ *E.* *Height above sea level*, 160*ft.*)

BY JAMES GLAISHER, ESQ., F.R.S., FROM THE OBSERVATIONS OF G. J. ELDRIDGE, ESQ., H.B.M.'S CONSUL.

THE observations at Beyrout, in Syria, distant from the sea about a quarter of a mile, with standard instruments, which have been examined by Mr. Glaisher, consisting of observations of a standard barometer, its attached thermometer, the dry and wet bulb thermometers, the direction and estimated strength of the wind, and general state of the weather, were made twice a day, viz., at 9 A.M. and at 10 P.M., together with readings of a maximum thermometer, a minimum thermometer, and a rain gauge, read daily. The following are the monthly values of the several elements:—

The numbers in column 1 of this table show the highest readings of the barometer in each month; of these, the highest appear in the winter, and the lowest in the summer months. Of the lowest readings in column 2, there does not seem to be any change due to seasons; the minimum is in December, and the next in order in June, whilst that in May is nearly of the same value. The numbers in the 3rd column show the extreme range of readings in each month, the smallest is in July, being less than a quarter of an inch, whilst the largest is in December, being nearly three-quarters of an inch, or three times as large as that in July. The numbers in the 4th column, showing the monthly average pressure of the atmosphere, are smaller in the summer and larger in the winter months, the difference between them being as much as a quarter of an inch.

The highest temperature of each month is shown in column 5; of these January has the lowest, 63°, and July the highest, 95°. The numbers in the next column show the lowest temperature of each month; in January and February the values are as low as 44°, whilst in June the minimum is 72°. The extreme range of temperature in

Name of Station.	Year and Month.	Barometer.				Temperature of Air in month.						Approximate mean temperature from maximum and minimum.	Mean temp. at 9 a.m. & 10 p.m.			Vapour.			Mean degree of humidity. Saturation=100.	Mean weight of a cubic foot of air.	Wind.					Rain.	
		Highest reading.	Lowest reading.	Range.	Mean reduced to 32°.	Highest.	Lowest.	Range.	Mean.				Dry bulb.	Wet bulb.	Dew point.	Elastic force.	In a cubic foot of air.				Estimated strength.	Relative proportion of.				Number of days it fell.	Amount collected.
									Of all highest.	Of all lowest.	Daily range.						Mean.	Short of saturation.				North.	East.	South.	West.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
		In.	In.	In.	In.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.											In.	Deg.
Beyrout, Syria.	1868. Nov.	30·160	29·730	·430	29·873	72·0	58·5	13·5	68·9	62·0	6·9	65·4	65·4	62·6	60·3	·524	5·8	1·1	84	525	1·1	1	5	8	8	15	9·22
	Dec.	30·260	29·530	·730	29·901	66·0	52·0	14·0	64·0	56·3	7·7	60·1	58·9	55·8	53·0	·403	4·8	1·1	81	534	1·5	4	3	13	11	22	12·48
Beyrout, Syria.	1869. Jan.	30·300	29·640	·660	29·860	63·0	44·5	18.5	58·7	52·6	6·1	55·6	55·6	52·3	49·2	·351	3·9	1·0	80	538	1·4	4	4	9	9	19	9·21
	Feb.	30.230	29·580	·650	29·915	66·0	43·5	22·5	59·3	52·1	7·2	55·7	56·6	52·7	49·1	·348	4·0	0·9	76	536	0·8	6	5	3	10	14	5·19
	March.																										
	April.	30·170	29·550	·620	29·817	85·0	55·0	30·0	69.0	60·0	9·0	64·5	64·4	60·0	56·4	·456	5·0	1·6	75	526	1·6	8	2	6	12	8	1·31
	May.	30·060	29·690	·370	29·753	82·0	61·0	21·0	74·9	68·2	6·7	71·6	71·8	67·9	64·9	·615	6·7	1·8	79	516	1·0	8	2	5	9	3	0·29
	June.	30·070	29·540	·530	29·689	92·5	72·0	20·5	83·8	75·9	7·9	79·7	80·0	74·1	70·0	·733	7·9	3·1	71	506	1·1	8	1	7	13	..	..
	July.	29·850	29·640	·210	29·621	95·0	59·5	35·5	84·5	75·8	8·7	80·2	80·6	75·0	71·2	·764	8·2	3·0	73	505	1·0	3	0	7	11	..	..

each month is shown in column 7, and these numbers vary from about 14° in November and December, to 35½° in July.

The mean of all the highest temperatures by day, of the lowest by night, and of the average daily ranges of temperature, are shown in columns 8, 9, and 10 respectively. Of the high day temperatures, the lowest are in January and February (about 59°), and the highest are in June and July (about 84°). Of the low night temperatures, the lowest (about 52°) took place in January and February, whilst the highest (about 76°) occurred in June and July. The average daily range of temperature, as shown in column 10, is small, varying from 6° to 9°.

In column 11 the mean temperature of each month, as adduced from observations of the maximum and minimum thermometers only, is given, and these, with so small a range of temperature as shown in column 10, must be near the truth. The months of lowest mean temperature are January and February (about 56°), and of the highest June and July (about 80°), the difference being about 24°.

The numbers in column 12 are those found by the simple mean of observations of a dry-bulb thermometer, taken daily at the hours of 9 A.M. and 10 P.M.; their agreement with those in the preceding columns is so close that it may safely be considered that the true mean values of meteorological elements can be adduced from observations taken in this climate at those hours, and therefore the numbers in columns 13 to 19, containing the hygrometrical states of the air, represent the mean values of each element for the whole day, and not merely those of the hours of observation.

The difference between the numbers in columns 12 and 14 show the average monthly temperature of the dew-point below that of the air, or that temperature at which dew was deposited; it is at about 5° below that of the air in winter, and at about 10° in summer.

The elastic force of vapour in January, as shown in column 15, is about the half of that in June and July. The water present in the air in the coldest months is about 4 grains, and in the hottest months about 8 grains, per cubic foot. The numbers in column 18 show that the air is dry, but not particularly so; it is most humid in November, and least so in June. The weight of a cubic foot of air under its mean pressure, mean temperature, and mean humidity, has varied about 33 grains in a cubic foot from January to July; about 24 grains is due to the expansion of air by the higher temperatures of June and July, and about 9 grains to the less pressure of the atmosphere in those months, both causes operating the same way.

Upon the whole period:—

The strength of the wind was somewhat greater in the months of December, January, and April, than in the other months.

The east wind was the least frequent, and the west the most frequent.

In the months of November, December, January, and April, the wind was mostly from south and west, and in the other months from north and west.

The largest amount of rain fell in the three months November, December, and January; at times falls to the amount of 1in., 2in., and to 2¾in. per day, have taken place. On the 1st, 2nd, and 3rd days of November, the fall of rain amounted to nearl 7in.; in the months of November, December, and January, the falls amounted to 30in. nearly, rain falling on every two out of three days nearly, whilst none fell in the months of June and July.

Thunderstorms occurred on the night of the 1st-2nd of December; 10th of December; the night of the 8th-9th of January; 22nd of January; the night of the 27th-28th of January; 16th of April; the night of 26th-27th of April; and 29th of May.

Thunder was heard on the 28th of February; 5th and 9th of April.

Lightning was seen on the 18th of November, 18th and 19th of December, 18th of January, 27th of February, and 11th, 28th and 29th of May.

Lunar Halos were seen on the 25th and 28th of December.

Hail fell on the 29th of November.

Khamsin, or *Hot Wind* prevailed on the 4th, 19th, 20th, and 21st of April.

The following observations were made at OLIEH, MOUNT LEBANON, about eight miles S.W. of Beyrout, about 2,700ft. above the level of, and five miles distant from, the sea.

The observations include readings of the barometer and dry and wet bulb thermometers, taken four times a day, viz., between 8h. and 9h. A.M., at noon; between 5h. and 6h. P.M.; and between 10h. and 11h. P.M. The means correspond to these times, and for the want of night observations will be higher than the true mean values for this station; the barometric readings have been reduced to the constant temperature of 32°. The results are are follows:—

Name of Station.	Year and Month.	Barometer.				Mean temp.			Vapour.			Mean degree of Humidity. (Saturation = 100)	Mean weight of a cubic foot of air.
		Highest Reading.	Lowest Reading.	Range.	Mean unreduced.	Dry Bulb.	Wet Bulb.	Dew point.	Elastic force.	In a cubic foot of air.			
										Mean.	Short of saturation.		
	1868.	In.	In.	In.	In.	Deg.	Deg.	Deg.					
Olieh, Mount Lebanon.	July.	27·165	26·935	0·230	27·063	70·8	65·1	62·5	·567	6·2	2·1	75	470
	Aug.	27·540	27·005	·535	27·112	77·7	68·0	61·3	·542	5·8	4·4	57	466
	Sept.	27·260	27·095	·165	27·174	70·5	66·7	63·8	·594	6·5	1·7	79	473
	Oct.	27·370	27·135	·235	27·240	74·8	63·7	55·7	·456	4·8	4·5	52	471

From the thermometrical observations the temperature appears to be high, and the air dry, much dryer than at Beyrout. The wind in the

months of July, August, and September, was mostly from the S.W., and in October from the east and north. On the 4th day of July the air was so clear that the mountains of Cyprus, distant about 135 miles, were distinctly visible at sunset.

Showers of rain fell on August 13th and 19th, and September 18th and 21st.

The following results were deduced from observations taken at the JEWISH COLLEGE, GHAZIR, MOUNT LEBANON, at about 1300ft. above the level of the sea. The barometer observations were taken with two Aneroid barometers, the reading of which agreed well together, and those of temperature with French instruments (whose characters are unknown) in the months of March and April, and with English in the months of May and June. The headings of each column will give sufficient explanation; but the returns are too few to be able to speak with any confidence as to their value:

Name of Station.	Year and Month.	Barometer.				Temp. of the Air.			Amount of rainfall.
		Highest reading.	Lowest reading.	Range.	Mean unreduced.	Maximum.	Minimum.	Range.	
	1869.	in.	in.	in.	in.	deg.	deg.	deg.	in.
Jewish College	March.	28·610	28·100	·510	28·390	73·8	46·4	27·4	4·33
	April.	28·760	28·310	·450	28·490	84·2	50·4	33·8	3·22
	May.	28·580	28·250	·330	24·440	82·4	58·1	24·3	1·37
	June.	28·650	28·250	·400	24·430	93·2	65·5	27·7	—

JAMES GLAISHER.

LOCAL ASSOCIATIONS.

THE following is a list of local associations now in operation:—

ALNWICK: *Hon. Sec.*—Edward Allen, Esq.
BATH: *Hon. Sec.*—Rev. T. P. Methuen.
BIRMINGHAM: *Hon. Sec.*—Rev. Charles Evans.
CAMBRIDGE: *Hon. Sec.*—Rev. T. G. Bonney, Tutor of St. John's College.
CHESTER: *Hon. Sec.*—The Very Rev. the Dean of Chester.
CHICAGO, U.S.A.: *Hon. Sec.*—Rev. Dr. Patton.
CLIFTON and BRISTOL: *Hon. Sec.*—Rev. C. H. Wallace.
DALKEITH: *Hon. Sec.*—W. Bryce, Esq., M.D.
DOVER: *Hon. Sec.*—Rev. W. Light.
DUNDEE: *Hon. Sec.*—R. Mackenzie, Esq.
EDINBURGH: *Hon. Sec.*—Rev. W. Lindsay Alexander, D.D., and A. Keith Johnstone, Esq., LL.D.
FALMOUTH, for the County of Cornwall: *Hon. Secs.*—A. Lloyd Fox, Esq., and W. P. Dymond, Esq.
FROME: *Hon. Sec.*—Rev. T. G. Rooke.

GLASGOW: *Hon. Sec.*—A. B. M'Grigor, Esq.
GREENOCK: *Hon. Sec.*—D. MacDonald, Esq.
HERTFORD: *Hon. Sec.*—Rev. T. Lingley.
LEEDS: *Hon. Sec.*—Edward Atkinson, Esq.
LIVERPOOL: *Hon. Sec.*—Rev. C. D. Ginsburg.
MALVERN: *Hon. Sec.*—Rev. G. Fiske.
MANCHESTER: *Hon. Sec.*—Rev. W. Crane.
MIDDLESBOROUGH: *Hon. Sec.*—Rev. Vyvyan H. Moyle.
NORTHAMPTON: *Hon. Sec.*—E. F. Law, Esq.
NOTTINGHAM: *Hon. Sec. pro tem.*—Rev. F. Morse.
NEWCASTLE: *Hon. Sec.*—Thomas Hodgkin, Esq.
OXFORD: *Hon. Sec.*—Rev. Professor Rawlinson.
PERTH: *Hon. Sec.*—R. Jameson, Esq.
PLYMOUTH: *Hon. Secs.*—J. B. Rowe, Esq., and J. Shelley, Esq.
TUNBRIDGE WELLS: *Hon. Sec.*—Rev. W. Weston Elwes.
UXBRIDGE: *Hon. Sec.*—J. Hunt, Esq., F.R.G.S.
WARMINSTER: *Hon. Sec.*—J. Morgan, Esq.

It will be seen that there are yet many important towns unrepresented by Local Secretaries or Associations. Friends are earnestly invited to assist in promoting the formation of the latter. This can be effected most easily by means of a public meeting. The central office will be at all times ready to assist in every possible way. It will be borne in mind that the sum of money required yearly is not large, and that the Committee desire only to secure a sufficient number of small subscribers.

COLLECTING CARDS.

These are prepared for any friends of the Society who may be willing to assist in this way. Ladies who have leisure are specially invited to undertake them. Collectors may inform subscribers that the Quarterly Reports are published for all. It is requested that the cards may be returned and exchanged for new ones every three months.

LECTURES.

THE following gentlemen are authorised to give Lectures on behalf of the Fund:—

Rev. F. K. Scrivener, St. Gerran's Rectory, Grampound, Cornwall.
Rev. J. W. Bardsley, Bootle, Liverpool.
Rev. Henry Geary, Herne Bay.
Rev. Robert Allen, St. Mark's, Audley-street.
Rev. James King, St. George's, Hanover-square.
Rev. G. St. Clair, Banbury.

Rev. Daniel Kerr, Dunse.
Edward Allen, Esq., Alnwick.

The Rev. Greville J. Chester has also kindly undertaken some lectures.

It is particularly requested that no *invitations* to give Lectures for the Fund be given to any person not on the Committee, except through the Secretary. The above-named gentlemen are, of course, authorised to receive subscriptions. But, besides these, no other person, not being a member of General or Local Committee, has authority to lecture on the work of the Fund, or to collect money for it. This caution is not, of course, intended to refer to those gentlemen who kindly give their gratuitous services to the Society.

PUBLICATIONS OF THE SOCIETY.

1. Report of Preliminary Meeting, 1865.
2. Captain Wilson's Expedition, 1866.
3. Meeting at Cambridge, 1867.
4. Annual Meeting, with Lieut. Warren's Report. 1868.
5. Statement of Progress, January 1st, 1869.
6. Lieut. Warren's Letters and Reports, with lithographed plans.
7. Lieut. Warren's Notes on the Valley of the Jordan and Excavations at Ain es Sultan (Jericho).
8. Dean Stanley's Sermon on the Exploration of Palestine. Price 6d.
9. Quarterly Statement. No. I. April 1st, 1869.
   Contents : Statement by Committee.—Narrative of the Proceedings of the Fund.—"Rob Roy" on the Works.—Lieut. Warren on the Temple of Herod.—Lieut. Warren's Letters (XXXIV. to XXXV.), with two illustrations, &c., &c., &c.
10. Quarterly Statement. No. II. June 24th, 1869.
    Contents : Statement by Committee—Mr. Deutsch on the Letters at the S.E. Angle of the Haram at Jerusalem. — Captain Wilson on the Synagogues of Galilee, with an illustration.—Mr. Rogers's Excavation of Tell Salahîyeh. — Mr. Eldridge's Meteorological Observations on Mount Lebanon.—Mr. Simpson on Robinson's Arch.—The last Report of the Executive Committee.—Lieutenant Warren's Letters, with an illustration.—List of Subscriptions, &c.
11. Quarterly Statement. No. III. September 30th, 1869.
    Contents : Statement—Rock-cut Tombs of Palestine, by Captain Wilson—Rev. Dr. Zeller on Kefr Kenna—Tables of Latitude and Longitude—Comparative Holiness of Mounts Zion and Moriah—Notes : Gold in Palestine ; A Singular Custom—Report of Annual Meeting—Meteorogical Observations. By James Glaisher, F.R.S.—Lieutenant Warren's Letters continued, No. XLIII. to XLV.

Nos. 5, 9, 10, and 11 may be had by all subscribers. 9, 10, and 11 are sold at 1s. each to non-subscribers, and 6d. each to subscribers, after the first copy.

A complete set of the lithographs, now 40 in number, may be had by forwarding stamps at the rate of 2d. for each lithograph required.

LIST OF SUBSCRIPTIONS.

JUNE 17TH TO SEPTEMBER 22ND, 1869.

a denotes Annual Subscriber.

*** If any omission or mistake be observed in the following lists, the Secretary will be very glad to be informed of it, and will rectify the error in the next Quarterly Statement.

	£	s.	d.
Cotswold Lodge, Cirencester..	1	1	0
John Mullings, Esq.	0	10	6
G. W. Norman, Esq.	10	0	0
Rev. C. Chamberlaine	1	1	0
C. F. Fellows, Esq.	5	0	0
*a*Col. the Hon. B. M. Ward ...	2	2	0
Mr. Clendenning.....	1	1	0
Miss Howorth	0	10	0
*a*R. Wynne, Esq.	1	1	0
Rev. C. Spencer Stanhope.....	1	1	0
Miss Roberts	0	10	0
Mrs. H. Lacon.....	1	2	6
Miss Vansittart	0	10	0
The Earl of Chichester	3	0	0
J. M. Heathcote, Esq.	1	0	0
Miss Thompson	2	2	0
Mrs. Parry	1	0	0
Mrs. Etough.....	1	0	0
Mrs. Haslewood	1	0	0
Joseph Paget, Esq.	2	2	0
Miss Hooper	0	10	0
E. P. and F. J.	0	10	0
*a*John Hogg, Esq.....	3	0	0
Miss Hicks	2	0	0
"Poor Curate"	0	2	8
F. Brames Hale, Esq.	5	0	0
C. Evans, Esq. (per)	0	10	0
Mrs. James	0	5	0
Royal Lodge, No. 207, Kingston	1	1	0
John Hill, Esq.	2	2	0
Rev. N. M. South	1	1	0
Rev. Middleton Onslow.....	1	1	0
Sir Moses Montefiore	10	10	0
Miss A. Harvey	2	0	0
*a*Rev. John W. Bright.....	1	1	0
*a*James Abbott, Esq.	1	1	0
Per Miss Salome Alexander ...	5	17	0
*a*Miss Enderby	1	0	0
Major H. I. Hall.....	2	0	0
Rev. Thomas France, 2nd Don.	5	0	0
Rev. F. Drummond Hay	0	5	0
F. Fillister, Esq.	0	5	0
Miss Cooper.....	0	2	0
Mr. John Simpson	0	4	0
Hon. R. Toler	1	0	0
G. Lampard	0	1	0
*a*Rev. H. Galbraith	1	0	0
"A Lady," per Mr. Edward Stanford	1	1	0
Daniel Munro, Esq.	1	0	0
G. M. E.	100	0	0
*a*M. C. Penson, Esq.	0	5	0
B. Jones, Esq...	5	0	0
*a*Miss Chambers	1	1	0
Arthur Barry, Esq.....	1	1	0
*a*Rev. T. Ladds.....	0	10	0
Messrs. Silver, Discount	0	6	3
*a*Samuel Scott, Esq.	1	1	0
*a*C. Carruthers, Esq.	1	1	0
Leonard Jaques, Esq.	1	1	0
N. C. Trueby, Esq.....	2	2	0
E. Akroyd, Esq., M.P.	5	0	0
Rev. W. Arthur	5	0	0
Rev. W. R. Bailey	5	0	0
Miss Creighton	1	0	0
Rev. Tullie Cornthwaite.....	5	0	0
W. G. Wodehouse, Esq.....	1	0	0
Stephen Hankey, Esq.	10	0	0
Henry Vaughan, Esq.	20	0	0
H. S. Perry, Esq.	1	0	0
*a*W. Robinson, Esq.....	1	1	0
*a*W. Robinson, Esq., jun.	1	1	0
*a*Rev. John Robinson	1	1	0
Miss Clayton	0	5	0
G. M. Hicks, Esq.	5	5	0
*a*Miss Beaufort	1	1	0
*a*Rev. T. Lord	0	10	0
Lady Belcher, 2nd Don.	1	1	0
Rev. Marwood Tucker, 2nd Don.	2	0	0
Rev. Thomas Binney	7	7	0
Rev, J. C. Wharton	1	1	0
*a*Miss Mayow.....	1	0	0
*a*A Friend, per Mr. Hancock ...	1	1	0
*a*Rev. A. E. Northey	1	1	0
Rev. H. H. Hughes	5	0	0
Per Rev. Dr. Scott—			
A Friend	1	0	0
Mr. Beddy	1	0	0
G. Miller, Esq.	2	2	0
"A Friend," per C. Lambert, Esq.	0	5	0
Dr. Shann	2	0	0
Rev. R. Bellamy	2	0	0

	£	s.	d.
Hon. Spencer Canning	0	2	6
Miss Ellen Brock	0	10	0
*a*Rev. C. G. Chittenden	1	1	0
*a*Rev. Chas. Penny	0	10	0
E. R. Fisher, Esq.	2	2	0
Mrs. Morrison	50	0	0
Mrs. Eliza Hill	0	1	0
*a*H. W. Freeland, Esq.	1	0	0
Rev. Melsup Hill (*a* £1 1s.)	5	0	0
*a*Rev. C. L. Pemberton	2	0	0
Per Miss Readhouse	2	2	0
Sir William Hutt	5	0	0
Miss Anne Stock	1	1	0
Rev. H. W. Shepherd	5	0	0
Miss Sydney Macgregor	1	0	0
Sir T. E. Colebrooke	10	10	0
*a*Mrs. Robb	1	1	0
Col. W. G. Hebbert (£1 *a*)	2	0	0
*a*Miss Zornlin	1	2	0
*a*Gen. Stanhope	1	1	0
*a*G. Harris, Esq.	1	1	0
Rev. Horatius Bonar, D.D.	5	0	0
Mrs. Coker Adams	1	1	0
*a*Mrs. Bacon	1	0	0
*a*Mrs. Mayow Adams	1	0	0
J. S. T.	0	10	0
Per Miss Retrou—			
Miss Cooper	0	2	6
Rev. E. Bray	0	2	6
M. W. (10s. *a*)	1	0	0
*a*Maj.-Gen. McQueen	2	2	0
Young Men's Christian Association, Shipton	1	1	0
*a*Rev. H. B. Swete	1	1	0
Rev. C. Paroissien	10	0	0
Miss Hare	1	0	0
S. Appleby, Esq.	0	15	6
Rev. W. H. Milman	1	1	0
A. H. Leas, Esq. (£1 *a*)	2	2	0
*a*Dr. Wilson	1	1	0
*a*H. Middleton, Esq.	1	1	0
Col. Hannington	5	5	0
*a*Rev. G. W. Straton	1	0	0
Lord Mark Kerr	3	3	0
*a*W. J. Booth, Esq.	1	1	0
W. Alepley, Esq.	0	10	0
Mr. Cooper	1	1	0
R. Hanbury, Esq.	10	0	0
J. Brown, Esq.	1	1	0
*a*Mrs. Norris	2	2	0
Mrs. Knight	1	0	0
Isaac Brown, Esq.	1	1	0
Rev. C. J. Goodhart	0	10	6
	0	10	6
Rev. J. H. Worsley	5	0	0
John Humphrey, Esq. (per)	1	16	6
*a*Rev. H. E. Lowe	2	2	0
Rev. W. B. Addis	1	0	0
*a*Maj.-Gen. Clarke	0	10	0
*a*Mrs. Bidder	1	1	0
Mrs. Scales, per Rev. T. T. Waterman	1	1	0
Rev. C. Hamilton	1	1	0
Church of England Young Men's Society	1	1	0
Christian World List	3	2	0
Miss Wilks	1	1	0
W. Bliss, Esq.	5	5	0
Allowed by Peninsular and Oriental Company	6	0	0
Mr. W. Cairns	1	0	0
W. Letheby, Esq.	0	10	0
J. W. Ward, Esq.	0	5	0
S. Bate, Esq.	0	2	6
The Countess of Ross	1	0	0
H. Anderson, Esq.	0	5	0
*a*Rev. Dr. Wickes	0	10	6
Per W. Appleford	0	2	6
*a*Lady Harriet Fowler	1	1	0
*a*Miss Selina Bovill	1	1	0
*a*Col. Morrison, R.E.	1	1	0
*a*H. Gaze, Esq.	2	2	0
Mr. Jay	1	0	0
Mrs. D. S. Dykes	5	5	0
Miss Buxton	5	5	0
Travers Buxton, Esq.	5	0	0
*a*James Ostler, Esq.	0	10	0
J. J. Gibb, Esq.	2	0	0
Charles Gibb, Esq.	2	0	0
*a*W. M. Newton, Esq.	1	1	0
*a*Mrs. Anderson	1	1	0
Rev. J. Radford Thomson	0	5	0
Collections at Lectures per Rev. G. St. Clair	9	13	5
By Sale of Photographs—			
By Agents	65	0	5
Sold at Exhibition	45	1	0
By sale of Publications through Office and Exhibition	59	9	6
Admission to Exhibition	210	19	0

LOCAL SOCIETY OF ALNWICK.

	£	s.	d.
Per Edward Allen, Esq., *Hon. Sec.* —Rev. W. Champion Streatfield	1	1	0
Ralph Atkinson, Esq.	1	1	0
Rev. D. Donaldson	0	10	0
Mr. Thomas Walley	0	5	0
Mrs. James Heatley	0	5	0
Proceeds of Lectures	1	19	0
On account of Photographs]	2	19	0

LOCAL SOCIETY OF BATH.

Hon. Sec.—Rev. T. P. Methuen.

	£	s.	d.
Rev. J. Wood	1	0	0
Rev. J. Moore	0	10	0
Rev. J. Bond	0	10	0
Rev. J. Macnaught	0	5	0
Rev. C. Kemble	0	10	0
Rev. J. Olive	1	6	0
Rev. M. H. Seymour	1	1	0
Rev. F. T. Bassett	0	5	0
Capt. Anderdon	1	0	0
General Turner	0	5	0
Rev. J. Earle	0	5	0
Rev. W. S. Shaw	0	5	0
Rev. J. Winwood	1	1	0
Anonymous	2	0	0
For Dr. Tristram's Autograph	0	5	0
Mrs. Mount	1	0	0
W. Daubeny, Esq.	0	5	0
Mr. Walker, sen.	1	0	0
Mrs. Carr	0	5	0
Capt. Hardy, R.N.	10	0	0
Collection at Meeting	9	3	11
Dr. Everett, M.D.	0	5	0
Rev. W. Hawks	0	5	0
Rev. H. Escott	0	5	0
Rev. J. Butlanshaw	0	5	0
Mrs. J. Butlanshaw	0	5	0
Miss Dyke	0	5	0
Miss A. Smith	0	5	0
Miss H. Armitage	0	5	0
Rev. J. Lawes	0	10	0
Mrs. Lawes	0	5	0
Mrs. S. Smith	0	5	0
Mrs. Gen. Ainslie	0	5	0
Rev. R. Drummond	0	10	0
Mrs. Johnston	0	10	0
R. Stothert, Esq.	0	5	0

LOCAL SOCIETY OF CHICAGO, U.S.A.

Hon. Sec.—Rev. W. Patton, D.D.

	Dls.	cnts.
W. H. Taylor, Esq.	100	00
E. B. McCagg, Esq.	10	00
Hon. Mark Skinner	10	00
W. H. Bradley, Esq.	10	00
E. H. Sheldon, Esq.	10	00
H. B. Culver, Esq.	10	00
E. S. Blatchford, Esq.	10	00
Rev. J. E. Roy, D.D.	5	00
Rev. E. P. Goodwin, D.D.	5	00
Rev. H. L. Hammond	5	00
Rev. G. S. F. Savage	5	00
T. M. Avery, Esq.	5	00
T. L. Miller, Esq.	5	00
C. Mason, Esq.	5	00
S. M. Moore, Esq.	5	00
J. H. Pearson, Esq.	5	00

This by exchange produced £30 5s.

LOCAL SOCIETY OF CLIFTON.

Hon. Sec.—Rev. C. H. Wallace.

	£	s.	d.
The Misses Douglas	0	15	0
Mrs. Cornish	1	1	0
Rev. J. S. Gale	0	10	0
Rev. W. H. Barlow	0	5	0
Rev. W. W. Gibbon	0	5	0
Rev. J. G. Luckock	0	5	0
Rev. J. P. Richardson	0	5	0
Rev. J. H. Clark	0	5	0
Rev. J. Hawksley	0	5	0
T. Page, Esq.	0	10	0
Dow. Lady Mackworth	0	10	0
Do. do (Don.)	0	10	0
Mrs. H. Mackworth	0	10	0
H. Rumbold, Esq.	1	0	0
S. Budgett, Esq.	5	0	0
Rev. F. Mather	0	5	0
Rev. C. J. Harford	0	5	0
Miss Ware	0	5	0
Collected by the Rev. J. Wickenden :—			
A. George, Esq.	1	0	0
W. George, Esq.	0	10	6
Rev. F. E. Williams	1	0	0

LOCAL SOCIETY OF EDINBURGH.

Hon. Secs.—Rev. Dr. Lindsay Alexander, and Dr. A. Keith Johnstone.

Hon. Treasurer.—W. Leckie, Esq.

The subjoined is the complete list from June, 1866 :—

	£	s.	d.
James Richardson, Esq.	5	0	0
A. Ramsay, Esq.	5	0	0
J. Muir, Esq., LL.D.	5	0	0
J. Miller, Esq.	5	0	0
Rev. G. D. Cullen	1	1	0
J. B. Basetor, Esq.	5	5	0
C. W. Anderson, Esq.	0	10	0
Mrs. Muir	2	0	0
W. J. Ford, Esq.	1	1	0
W. Leslie, Esq.	1	1	0

	£	s.	d.
Rev. W. Robertson, D.D.	2	0	0
J. Boyd, Esq.	1	1	0
A. V. Dunlop	2	0	0
Rev. Dr. Hanna	3	3	0
Dr. Sibbald	1	1	0
R. N. Smith, Esq.	5	0	0
Collections at Meeting in Royal Hotel	4	14	5
A Black, Esq.	5	0	0
J. Millar, Esq.	5	0	0
C. Sanson, Esq., jun.	3	3	0
Professor Allman	2	0	0
Rev. Dr. Lindsay Alexander	2	0	0
Henry Craigie, Esq. (the late)	1	0	0
The Rt. Hon. the Lord Provost	5	0	0
Professor Balfour	1	0	0
J. H. Skinner, Esq.	5	0	0
A. Christie, Esq.	2	2	0
D. Laing, Esq.	2	0	0
J. G. Hainy, Esq.	1	1	0
Rev. Dr. Aitken	2	0	0
Rev. J. Taylor	0	10	0
Mrs. Innes	1	0	0
Rev. Dr. A. Thomson	1	0	0
Rev. Dr. Muir	1	0	0
P. Tennant, Esq.	1	0	0
Colonel Barclay	2	0	0
W. Stewart, Esq.	10	10	0
D. Lamsden, Esq.	2	0	0
J. Boyd, Esq.	1	0	0
Sheriff Clegham	1	1	0
Per the Lord Provost	0	5	0
Mrs. Oliphant	50	0	0
Dr. Sanderson	1	0	0
Rev. B. Bell	1	0	0
R. Cox, Esq.	2	0	0
R. E. Scott, Esq.	1	1	0
Mrs. D. M'Farlane	1	1	0
Rev. Dr. Forbes	1	0	0
Mrs. Seton	0	10	0
B. Fowler, Esq.	1	0	0
Collection in St. Augustine Church, at Lecture by Dr. Alexander	14	13	7
Dr. James Simson	1	0	0
Rev. James M'Gregor	0	10	0
R. White, Esq.	0	5	0
Mr. Fraser	0	5	0
H. W. Cornillon, Esq.	0	5	0
A. Laing, Esq.	0	10	0
J. Turnbull, Esq.	5	0	0
J. S. Mark, Esq., S.S.C.	1	0	0
James Watson, Esq.	1	0	0
E. S. E.	1	0	0
Rev. D. Bannerman	0	10	0
T. Martin, Esq.	1	0	0
A. K. Johnston, Esq.	5	0	0
J. Watson, Esq.	1	1	0
W. Dickson, Esq.	1	0	0
G. M. Tename	2	0	0
William Nelson, Esq.	10	0	0
J. Stevenson, Esq.	2	2	0
J. Dnyburgh, Esq.	1	1	0
J. Stevenson, Esq.	1	1	0
Rev. Dr. Veitch	3	3	0
Rev. J. C. M. Smith	1	1	0
T. Nelson, Esq.	5	0	0
G. F. Barbow, Esq.	5	0	0
G. W. Simpson, Esq.	1	1	0
Mrs. Bruin	0	10	6
M. T.	0	3	0
Rev. K. M. Stuart	1	0	0
J. Galshaw, Esq.	10	0	0
W. Beattie, Esq.	2	2	0
J. Gibson, Esq.	1	0	0
J. Wright, Esq.	1	0	0
Rev. T. Wilson	1	0	0
Mrs. Graham	1	0	0
— Crooks, Esq.	1	0	0
— Regan, Esq.	1	0	0
J. W. Marwick, Esq.	1	0	0
D. M. Larew, Esq.	0	10	0
Anonymous	0	10	0
Collection at Lent	3	1	9
Rev. Professor Blaikie	3	3	0
Rev. A. Nelson	1	1	0
J. Young, Esq.	5	0	0
J. Falshaw, Esq.	5	0	0
H. Stephens, Esq.	1	0	0
Mr. Mill	1	0	0
Rev. D. Bannerman	0	10	6
Collection at Lecture Hall	9	17	3
Collection at Augustine Church	5	16	4
Rev. W. Thomson	1	0	0
R. Johnston, Esq., W.S.	1	0	0
Sir F. Outram	2	0	0
A. Craig, Esq.	1	0	0
J. D. Peddie, Esq.	2	0	0
Collection at St. Thomas's Chapel	10	6	7
Donation of J. Hayes, Esq.	5	0	0
W. Salmond, Esq., jun.	0	5	0
G. H.	0	10	0
Lieut.-Col. Davidson	0	10	0
J. Boyd, Esq.	1	0	0
J. Johnston, Esq.	1	1	0
The Marquis of Tweedale	10	0	0
Mr. and Mrs. Coventry, and per	0	10	0
Collected by W. Wilson, Esq.	2	6	0
Professor Balfour	1	0	0
J. N. Arnott, Esq.	1	1	0
J. Watson, Esq.	1	1	0
J. Kennedy, Esq., W.S.	1	1	0
D. Chalmers, Esq.	1	1	0
Rev. G. Hunter	0	10	0
P. H. D., per do., 2s., and Miss C., per do., 2s.	0	4	0

	£	s.	d.
LOCAL SOCIETY OF GLASGOW.			
Chairman. — The Hon. the Lord Provost.			
Hon. Sec.—A. B. M'Grigor, Esq.			
Messrs. G. and J. Burns	50	0	0
Messrs. W. Baird and Co.	25	0	0
*a*Robert Napier, of Shandon	20	0	0
Messrs. J. and W. Campbell	20	0	0
Messrs. W. Graham and Co.	20	0	0
*a*J. Nicol Fleming, Esq.	10	0	0
*a*Peter Denny, Esq.	10	0	0
*a*W. Ewing, Esq.	10	0	0
*a*John Orr Ewing, Esq.	10	0	0
*a*Sir J. Lumsden, Lord Provost	5	5	0
Rev. Dr. Alex. Wallace	5	5	0
J. C. Bolton, Esq.	5	0	0
W. Kerr, Esq.	5	0	0
R. Kerr, Esq.	5	0	0
Messrs. Mitchell, Allardia, and Mitchell	5	0	0
Messrs. A. Meen and Co.	5	0	0
G. Readman, Esq.	5	0	0
James Hannan, Esq.	5	0	0
Charles Gairdner, Esq.	5	0	0
T. M. Ferguson, Esq.	5	0	0
C. H. Bousfield, Esq.	5	0	0
*a*Messrs. Gillespie, Cathcart, and Fraser	2	2	0
*a*J. G. Fleming, Esq., M.D.	2	2	0
*a*Rev. R. S. Oldham, M.A.	1	1	0
*a*Principal Fairbairn	1	1	0
J. O. Mitchell, Esq.	1	0	0
*a*Rev. J. N. Maynard	1	1	0
*a*Rev. R. Jamieson, D.D.	1	1	0
*a*C. H. Wilson, Esq.	1	1	0
*a*John Hamilton, Esq.	1	1	0
*a*Rev. A. A. Bonar	1	0	0
*a*Messrs. Rutherford Bros.	1	1	0
*a*Rev. R. Buchanan, D.D.	1	1	0
*a*Dr. W. J. Gairdner	1	1	0
*a*Rev. Dr. Henderson	1	0	0
*a*Rev. W. P. Dickson, D.D.	1	0	0
J. B. Cowan, Esq., M.D. (for four years)	1	1	0
Joshua Patterson, Esq., M.D. (for five years)	1	0	0
Rev. John Caird (for five years)	1	0	0
Prof. Ramsay (for five years)	1	0	0
Rev. D. H. Weir, D.D. (for five years)	1	0	0
*a*Rev. George Pauline	1	1	0
W. B. Hodge, Esq.	1	0	0
Rev. A. N. Somerville	1	1	0
John Dawson, Esq.	1	0	0
George Reith, Esq.	1	0	0
Alex. Adie, Esq.	1	0	0
Thomas Chalmers	1	0	0
Miss Anderson	1	0	0
*a*Rev. D. Macleod	1	1	0
Alex. Moore, Esq.	1	1	0
Rev. Dr. Smith	0	10	6
Rev. Edward Smith	0	10	6
*a*W. Keddie, Esq.	0	10	6
N. H. Henderson, Esq.	0	10	6
Miss G. Baillie	0	5	0
LOCAL SOCIETY OF GREENOCK.			
Hon. Sec.—D. MacDonald, Esq.			
Abram Lyle, Esq.	10	0	0
James Marton, Esq.	5	0	0
Hugh Walker, Esq.	5	0	0
David Johnstone, Esq.	5	0	0
Duncan Shaw, Esq.	3	3	0
Robert Binnie, Esq.	3	3	0
Alex. Currie, Esq.	2	2	0
James T. Caird, Esq.	2	2	0
Alex. Scott, jun.	1	1	0
Thomas Prentice, Esq.	1	1	0
T. O. Hunter, Esq.	1	1	0
W. McClure, Esq.	1	1	0
H. W. Walker, Esq.	1	1	0
Robert Little, Esq.	1	1	0
James Miller, Esq.	1	1	0
Alex. McKenzie, Esq.	1	1	0
John C. Hunter, Esq.	1	1	0
Colin S. Caird, Esq.	1	1	0
Robert Blair, Esq.	1	1	0
Alex. Ferguson, Esq.	1	1	0
W. Birkmyre, Esq.	1	1	0
James Stewart, Esq.	1	1	0
John MacGregor, Esq.	1	1	0
Rev. J. Nelson, D.D.	1	1	0
Donald Macdonald, Esq.	1	1	0
A few Friends, per Mrs. Marquis, Liverpool	3	10	0
LOCAL SOCIETY OF HERTFORD.			
Hon. Sec.—Rev. T. Lingley.			
*a*Rev. T. Lingley	0	10	6
*a*Miss Laurence	0	10	6
LOCAL SOCIETY OF PLYMOUTH.			
Hon. Sec.—J. Shelley, Esq.			
John Bayly, Esq.	10	10	0
LOCAL SOCIETY OF TUNBRIDGE WELLS.			
Hon. Sec.—Rev. W. Weston Elwes.			
F. and M. Hunter, Esq.	1	0	0
R. Janson, Esq.	1	1	0
Mrs. Page	0	5	0

THE

PALESTINE EXPLORATION FUND.

STATEMENT OF PROGRESS.

Most of the history of the past year's work has already appeared in the three previous *Quarterly Statements*. But little matter of recent date has to be given in this. The reason is that stated in No. 3—the unfortunate illness of Captain Warren and the whole of the little party engaged in the excavations. It will be remembered that they left Jerusalem in the autumn, and went to the Lebanon to recruit their health. It is satisfactory to state that, with the exception of Corporal Ellis, who has been obliged to return home, they have all recovered, and are now actively engaged, under Captain Warren's able superintendence, in completing their work. The time spent in the Lebanon, however, has not been idle: the paper now published on the visit to Saida is the immediate result sent home; another on the Temples of Lebanon is expected shortly; while Captain Warren has found time to put together other rough notes of former journeys, of which the paper in this number on Masada and 'Ain Jidy is an example. Work was resumed in November, but too late for anything new in time for this number. The most important shaft now open is that of the north-east angle. Most of the shafts have unfortunately, been closed for want of funds. The expense of wood frames to keep them open, where wood is so costly, and decay so rapid, compelled Captain Warren to close them up; and, unless means can shortly be found of keeping open these passages to the history of the past, nothing will soon remain of them but the records already published in these pages.

Following the plan adopted at the end of 1869, we recapitulate here the chief points of interest in the work of the last twelve months.

A most curious and carefully constructed tank was found at the north side of the Haram Area. It was measured, sketched, and

thoroughly examined by Captain Warren in January last, and forms a valuable addition to Captain Wilson's investigations into the water-supply of the Haram, published in his Notes to the Ordnance Survey of Jerusalem.

The "Wall of Ophel" has been completely examined to a point where it terminates abruptly. Were nothing else the result of Captain Warren's labours, this would remain a monument of his energy. Without venturing to determine its date, it seems probable that it is at least on the site of the old wall built by Manasseh, and mentioned in Nehemiah; and its discovery shows how the suburb of Ophel lay under the Temple wall stretching down the hill to the south.

Very great interest was excited when, in 1867, it was announced that at one point, the south-west angle, the wall rose 150 feet above the level of the rock. But the discoveries of this year have shown that the wall rose to at least an equal height at the south-east and north-east angles. At the latter, the deepest shaft yet made—110 feet below the surface—found the rock still sloping downwards, and revealed the existence of a valley, suspected before, but not certainly known, across the north-east angle. The surface of the Haram, therefore, in some part of which the Temple, without any doubt, stood, is like the lid of an oblong box, three of whose angles are about 120 feet above the rock. At the south-east angle, as will be remembered, are the well-known and often described vaults known as "Solomon's Stables." No similar vaults, although they may exist, have yet been discovered at the other two; but it is not improbable that a large part of this area stands upon artificial vaults of masonry.

Characters were discovered at the south-east angle, which Captain Warren copied carefully, and which have been submitted to gentlemen most competent to judge of them. They are pronounced by Mr. Deutsch, after actual inspection, and comparison with similar characters at Sidon, to be Phœnician. Other characters, three of which have been copied and sent home, have been examined by the same eminent scholar, and pronounced to be also Phœnician. Photographs of these characters, from Captain Warren's tracings, have been taken, and will shortly be ready for subscribers at the Society's agent's, Mr. Stanford, 6, Charing Cross.

The Birket Israil, so called "Pool of Bethesda," has been examined and proved to have been constructed for a pool. Steps of concrete are found at the northern side, while the bottom is formed of a hard concrete 1ft. 4in. thick. Specimens of the concrete, and of the plaster above it, have been sent home.

The masonry at the north-east angle presents some curious points of difference to that at the south-east and south-west angles. The "bevel" or draft is found on the stones, but of a very different form. "Their faces," says Captain Warren, "are rough, but they are quite unlike the roughly faced stones at the south-west angle. They project from two to twenty inches or more, presenting a very curious appearance. The stone used does not seem to be so compact and hard as that at the south-east angle, and the chisel-work is not so carefully done."

A curious passage, which once evidently served as an overflow for the Birket Israil, was discovered in the wall at the north-east angle. (See *Quarterly Statement* III.; *Warren's Letters*, pp. 119—121.)

For Captain Warren's conclusions as to the work along the south wall and the south-west angle, readers are referred to his Letters, pp. 123—130.

Full accounts of the examination of the west wall have been published in *Quarterly Statement* II.; *Warren's Letters*, pp. 107—116.

The aqueduct at Robinson's Arch has been further investgated: the vaults at "Wilson's Arch" have yielded fresh discoveries; the "Gate Gennath" has been examined and described; the cavern at Khureitûn, the traditional cave of Adullam, has been explored; a shaft and gallery outside the Golden Gate, excavated with great labour, were crossed and stopped by a thick wall which could not be got through; a most curious cavern has been found and examined south of the Haram Wall, which appears to have been used first as a dyer's shop, and subsequently as a stable; its antiquity is proved by the fact that in the earth above it was found a drain containing lamps of early Christian date. Here was found the singular copper candlestick exhibited among the collection of the Society last summer.

The foregoing are the principal achievements of the past year. They have been accomplished in the face of many difficulties, but especially want of funds. The accounts sent home by Captain Warren are in themselves so succinct and full of matter, that it is diffi-

cult to condense them still further, and their great importance is not readily understood unless the letters themselves are carefully studied. As many subscribers have expressed a desire to have a map or plan by which the work can be followed, a woodcut of the Haram, with the shafts and their results noted, will be published in the next *Quarterly*. It is hoped to accompany this with a paper of full explanation.

Turning to other work, attention may be called to the publication of the *Quarterly Statements*. These, as has been stated before, are not intended solely for the publication and preservation of Captain Warren's reports, but also for occasional papers containing new facts or inferences connected with the objects of the Society. In the course of the year, papers have been furnished, many of them of great interest, by Captain Wilson, Mr. Morrison, M.P., Mr. MacGregor, Mr. Deutsch, Mr. Simpson, Mr. Crotch, Mr. Rogers, the Rev. Mr. Zeller; and meteorological observations, by Mr. Eldridge, have been put into shape for publication by Mr. Glaisher. It is hoped that our publications may continually attract the attention of travellers, and that the Committee of the Fund may be enabled to make it a storehouse of new facts. That the other objects of the Society are not wholly lost sight of in the engrossing work at Jerusalem is proved by the appearance of these papers. It is proved, too, by the Exhibition which was opened for three months at the Dudley Gallery, and was visited by some 6,000 people; and by the expedition, quite recently undertaken, by the aid of the Committee, by Mr. E. H. Palmer, Fellow of St. John's, Cambridge, in the Desert of Tîh. An opportunity occurred, not likely to occur again, by which the most valuable services of this gentleman, proved as they were in Sir Henry James's recent survey of Sinai, could be obtained for the Fund during the winter. The Committee resolved to accept the occasion, trusting that the friends of the Fund would see the importance of exploring, by means of so competent an observer, this most interesting and little known wilderness, the probable scene of the Forty Years' Wandering. The expense to the Fund will be about £300. Hampered as the Committee have always been for want of sufficient means to carry on their work in Jerusalem, it was with some hesitation that their resolution was arrived at. What, however, they have undertaken in hope, will doubtless be appreciated by their supporters; and the admirable

paper in the present number, written by a gentleman thoroughly acquainted with the subject, will show what has been done, and what remains to be done. Mr. Palmer is accompanied by Mr. Drake, who goes with him for purposes of Natural History, under a grant from the University of Cambridge. They expect to terminate their work in May or June.

With regard to the work done at home, in extending knowledge of results and gaining fresh subscribers, it is gratifying to announce that the sum of £1,300 has been collected during the last three months; that no less than 128 lectures have been delivered, in almost every case to large and attentive audiences; that important meetings have been held at Cheltenham, Newark, Reading, Bradford, Halifax, Worcester, Hereford, Wells, Gloucester, and other places, where local Associations have been formed; that other meetings have been asked for, and will be held in the spring; that the work of the Society formed one of the subjects at the recent Church Congress; and that the interest raised by the publication of the *Quarterly Statements* is clearly increasing. These, originally published for subscribers, have been sold in considerable numbers, and arrangements have been made by which they will henceforth be published by Mr. Bentley, 8, New Burlington Street, as well as at the Society's office. The great expense of printing and posting them to subscribers forces the Committee to ask those who may not wish to have them sent, to instruct the Secretary to that effect.

Among the illustrious visitors to Jerusalem in 1869, one, at least, did not depart without leaving substantial marks of his approbation of the work, and the Committee desire here to record their thanks to the Marquis of Bute for his munificent donation of £250 to Captain Warren.

Another visitor, Mr. MacGregor, has done good work for the Society, not only by his own discoveries described in his newly published book on his canoe voyage on the Jordan and the Lake Hooleh, but also by his graphic letter to the *Times*, descriptive of the exploration works of the Fund. And the Committee have also to thank the special correspondent of the *Times* and the artists of the *Illustrated London News*.

The Committee, while thanking the friends who have subscribed to carry on the work during the last year—with donations varying

in amount from a shilling to £250—have now to appeal to them for help for the next.

They have to finish what they have begun. Unless we receive additional support Captain Warren may have to return before another summer. The Fund begins the year with an assured income which, while it is larger than that of any previous year, is yet far short of its requirements. Nothing is spent in England, or on anything but "exploration," that can be avoided. The sum of £5,000 is asked for the next year; and while letters from all sides reach the Committee, expressing confidence that wealthy and educated England will keep up a movement which asks so little to effect so much, that sum has not been reached this year by £1,000. The friends of the Fund can help in many ways: by extending knowledge of its work or its intentions; by contributing money; and by circulating the *Quarterly Statements*. The words of Mr. Deutsch, at the last annual meeting, may again be quoted: "There are ruins enough in the City of Sorrows. Do not add fresh ruins. Do not leave broken shafts and abandoned galleries, and let it not be said that this England, the richest, proudest, and most Bible-loving country in the world, has abandoned one of its greatest undertakings—*for want of money*."

THE CEREMONY OF THE DOSEH AT BAALBEC.

BY WALTER MORRISON, ESQ., M.P.

It is said that, among the other changes which have come over Cairo, the ceremony of the Doseh has been discontinued. It has been described by Mr. Lane and by other writers. On certain days the Sheikh es Saadeeyeh, the chief of the Saadeeyeh dervishes, rides into the Ezbekeeyeh, or park of Cairo. "Here a number of the darweeshes and others, (I am sure there were more than sixty, but I could not count their number,) laid themselves down upon the ground side by side, as close as possible to each other, having their backs upwards, their legs extended, and their arms placed together beneath their foreheads. They incessantly muttered the word 'Allah.' About twelve or more darweeshes, most without their shoes, then ran over the backs of their prostrate companions; some beating 'bázes' or little drums of a hemispherical form, held in the left hand, and exclaiming 'Allah!' and then the Sheykh approached; his horse hesitated for several minutes to tread on the back of the first of the prostrate men; but, being pulled and urged on behind, he at length stepped upon him, and then, without

apparent fear, ambled at a high pace over them all, led by two persons who ran over the prostrate men; one sometimes treading on the feet, and the other on the heads. The spectators immediately raised a cry of 'Allah la la la la lah!' Not one of the men thus trampled upon by the horse seemed to be hurt; but each, the moment the Sheykh had passed over him, jumped up and followed the Sheykh."—*Lane's Modern Egyptians* (Chapter 26).

I believe that it is not generally known that the same ceremony is, or was, performed at Baalbec and Tabariyeh. I happened to be a spectator of it, in company with three friends, at the former place. On the morning of the 26th of April, 1862, a few days after the Feast of Bairam, we were at Baalbec, when we observed a crowd of people on the ridge east of the town. We climbed up to them, and found there apparently the whole Mahommedan population of the place. The women sat apart on a knoll in their white dresses; the men were dispersed in picturesque groups here and there, clad in clean, bright coloured cotton dresses; and the children played about among the groups. The scene was as gay and festive as it could be; and full in sight was the grand view of the Bekaa plain and the range of Lebanon, with the Baalbec Temples in the foreground. In the midst a circle of men and youths were performing a "zikr," and as it proceeded they worked themselves up into a state of frantic excitement. As the noise of the "zikr" increased, the detached groups closed in around them, and suddenly, as if by a simultaneous impulse, the performers leapt to their feet, and, without interrupting for a moment the wild chant, a procession was improvised, and the whole concourse streamed down the hill-side into the town. First marched men with eastern drums, drumming lustily; then men with a green banner; then came the performers in the "zikr," still mad with excitement; then the bewildered English "Howagees." Immediately in their rear came two "Shereefs" or descendants of the Prophet, in green turbans, on horseback; then more green flags and the rest of the men, while the rear was brought up by the women in white. All were yelling and howling with great energy, while the children danced about on our flanks like young imps. Arrived at the market-place, the procession suddenly broke up, the men, redoubling their vociferation, rushed on the "zikr" performers, slapped them on the back, screamed in their ears, and as it were huddled thirteen of them down to the ground side by side. Any traveller who knows the din which can be raised by half-a-dozen Arabs in so commonplace a matter as the choice of a porter to carry a portmanteau to his hotel, can readily understand that it was not easy to observe very accurately what was going on in the midst of the turmoil, but it seemed to me as if the crowd were endeavouring, half by force, half by persuasion, to induce others to submit to the ordeal. I observed, at all events, one or two men upon the ground who leapt up again with great alacrity while the confusion was at its height. At last, when thirteen men had thus prostrated themselves, there was a sudden lull in the tempest around. The crowd ceased to yell, formed a lane, where we obtained a front place

about the middle of the line of bodies, while one or two men passed over the bodies, packing them closely together in a very business-like manner, and arranging the head and feet of each person in a true line with the body. This done, we observed at the eastern end of the lane—the line of prostrate bodies lying east and west—the two shereefs. The elder was an old gentleman with grey beard, of a portly presence and good-natured face. I fancied he looked a little bored during the procession. He was mounted on a heavy and powerful flea-bitten white horse. The second shereef, the son I believe of the first, was a handsome slender youth of about seventeen, and was mounted on a neat little Arab mare. As the elder (and heavier) shereef approached, two men leading his horse by the bit, while some men with the green banners among them preceded him, the yelling broke out again louder than ever; the crowd in its frantic excitement surged to and fro; the men gesticulated; it was as if Pandemonium had broken loose; and in the midst the two shereefs approached. The crowd closed in behind them; and the knowledge that their retreat was thus cut off probably had its effect in inducing the horses to move forward: at last the elder shereef's horse reached the first body. For a moment it hung back, but the two men hauled in front, others pushed behind, the bystanders gesticulated and shouted, and the poor beast, bewildered and terrified, suddenly sprang forward, and at a pace between an amble and a scramble cleared the prostrate bodies, the two men who held the bit running lightly with bare feet over the heads and calves respectively of the devotees. The second shereef followed immediately, but his mare, having seen her companion show the way, passed with a light step over the bodies with very little hesitation or show of fear. The moment they had passed, the devotees sprang to their feet, the crowd surged in round them, and in a few seconds the tumult ceased; and, with the sudden change characteristic of the people, the faces even of the devotees resumed their usual calm and solemn expression. One man indeed lay rolling on the ground apparently in a fit, nobody paying much attention to him, but he soon got up and walked away with an indifferent air.

Probably at least one-half of the devotees were trod upon by one or the other of the horses, and the first horse was a heavy, clumsy animal. Nor did his action in passing over the bodies, almost leaping upon them from the ground, diminish the momentum of the impact of his feet upon their bodies, and yet no one seemed to be hurt.

Perhaps the ceremony may be already extinct. I do not recollect any description of it, except at Cairo, in any book; and so, as one of the objects of the Palestine Exploration Fund is to collect the customs of the country, this narrative may find a spare corner in one of our *Quarterly Statements*.

W. M.

ON THE SITE OF AI AND THE POSITION OF THE ALTAR WHICH ABRAM BUILT BETWEEN BETHEL AND AI.

BY CAPTAIN CHARLES W. WILSON, R.E.

In the spring of 1866 several days were spent by Lieutenant Anderson and myself in examining the mountain district east of Beitin (Bethel), with the view of fixing, if possible, the site of Ai, and the position of the mountain on which Abram pitched his tent and built his second altar to Jehovah after entering the Promised Land. The examination consisted in personally visiting every hill-top and almost every acre of ground for several miles, east, north, and south of Bethel, and the result was most satisfactory, for we were able with great certainty to identify Ai with Et-Tel, and the mountain of the altar with a prominent hill between Et-Tel and Beitin. Several previous travellers appear to have identified Ai with the quasi-isolated hill of Et-Tel, but their descriptions of it are vague and unsatisfactory, its position is constantly changing on their maps, and it appears as Tel el-Hajar, "the heap of stones," Tel er-Rijmeh, "the heap of ruins," names which were probably given by the Arabs in answer to the question "What Tel?" when the traveller was not satisfied with the first simple answer that he received—that it was Et-Tel, "the heap." After close questioning we could never obtain any other name than that of Et-Tel, and it was with great pleasure that, after our return to England, I learnt from the Rev. G. Williams that in the original text of Joshua viii. 28, Joshua is said to have "burnt Ai and made it a Tel for ever," and that the word "Tel" only occurs in four other passages of the Bible, among which are Deut. xiii. 16, and Josh. xi. 13. Mr. Williams's identification of Ai with Et-Tel, which I was not aware of at the time, was described by him in a paper read before the Church Congress at Dublin in 1868.

The topography of Ai is as minutely described as that of any other place in the Bible; it lay to the east of Bethel, it had a valley on the north, and another on the west, in which the five thousand men were placed in ambush; it also had a plain in front of, or on the east side of it, over which the Israelites were pursued by the men of Ai. (See Joshua vii. 2, and viii. 11—14.) These features are all found in connection with Et-Tel, and with no other place in the neighbourhood of Bethel. The ground which at first breaks down rapidly from the great ridge that forms the backbone of Palestine, swells out into a small plain three-quarters of a mile broad before commencing its abrupt descent to the Jordan valley, and at the head or western end of this plain, on a projecting spur which has almost the appearance of an isolated hill, are the ruins known as Et-Tel. A short distance west of the mound, and entirely concealed from it by rising ground, is a small ravine well suited for an ambush, one of the branches of the main valley which runs close to Et-Tel and protects its northern face, the same into which the army of the

Israelites descended the night before the capture of the city. On the hills to the north beyond the valley, Joshua encamped before making his final arrangements for the attack (viii. 11, 12), and it seems probable that he took his stand at some point on the same hill-side whilst the battle was raging, for there is a most commanding view over the whole scene, not only up the lateral valley in which the ambush was placed, but also down the way of the wilderness. He would thus be able at the same time to control the feigned flight of the Israelites, and signal the ambush to rise up quickly and seize the city. The site of Ai is now covered from head to foot with heaps of stones and ruins; there are a large number of rock-hewn cisterns and the remains of ancient terraces, some of which are cultivated by the fellahin of the neighbouring villages. On the top of the hill is a small circular space with a few olive-trees, which are blown on one side by the westerly gales like the well-known "Judas tree" at Jerusalem, and form a prominent object in the landscape for miles round, as the towers of Ai may have done before Joshua made them a Tel for ever. It may be mentioned here that there is no practicable road up the beds of the wadies from Jericho to Bethel. The present track crosses the plain mentioned above as lying below Et-Tel; and the old road, the ascent by which Elisha "went up" to Bethel, must have followed the same course. Ai lying thus between the ravine on the north and the gorge on which Michmash stands (the "passage" of Isaiah x. 29) on the south, would lie directly in the way of an army advancing from the Jordan Valley to the interior of Palestine.

Having fixed the site of Ai, our next object was to find the hill on which Abram and Lot were encamped before their separation. The place is described in Genesis xii. 8, as "a mountain on the east of Bethel, having Bethel on the west, and Ai on the east," and exactly in this position we found a hill from which there is a most commanding view, such as might be expected from Genesis xiii. 10, over the surrounding country, embracing the lower portion of the Jordan Valley, the plain of Jericho, and the northern extremity of the Dead Sea.

On the top of the hill we noticed the ruins, or rather foundations, of an old fortified church, which are mentioned by one or two writers only. The church is 65ft. 6in. long by 48ft. 6in. broad, and lies in an enclosure 133ft. long by 73ft. broad, round the walls of which can be traced the foundations of cells or chambers. Some fragments of Corinthian capitals and the broken shafts of several columns were lying in the interior.

The presence of a church in such a position, with such a view from it, and with traces of an old road leading from it towards Bethel, was so striking that we could hardly resist coming at once to the conclusion that the site of Abram's altar was perfectly well known to the early Christians—as Ai was certainly known to them by name down to the fourth century—and that the church was purposely built on the spot in commemoration of the events which had taken place there.

If we are right in identifying this hill with the mountain of Genesis xii. 8, there is one question on which considerable light will be thrown,

the site of the cities of the plain. It is hardly possible, I think, for any one to read the account in Genesis xiii. 10, without feeling that Abram and Lot were actually looking down on Sodom and Gomorrah when "Lot lifted up his eyes, and beheld all the plain of Jordan, that it was well watered everywhere, before the Lord destroyed Sodom and Gomorrah," &c. If this be the case, then the view from the hill fixes their position to have been on the plain at the northern end of the Dead Sea, not under the hills near Jericho, but out in mid-plain, possibly not far from the now barren tract which most travellers skirt on their way from the Dead Sea to the Jordan. That the greater portion of this tract was at one time cultivated, "well watered everywhere, even as a garden of the Lord," there is ample evidence in the numerous traces of former irrigation to be found on a careful examination of the ground. In support of this view may be cited the mention of the plain of Jordan in verse 10, which could not have extended below the point at which the river entered the Dead Sea, and the direct testimony in verse 11 that Lot journeyed east, a course which would lead him far away from the southern end of the Dead Sea where writers from Josephus to the present day have placed the cities of the plain. The only argument which appears to be unfavourable to the above theory is that Abram would not have been able to see the smoke of the country going up like the smoke of a furnace from any point near his camp at Mamre. This would perhaps be true if his tent was pitched under "Abraham's Oak," in the valley near Hebron, but not if it was at Râmet el-Khalil, where old tradition placed it, and where there are still the remains of Constantine's Church. The wording is also different in the two passages: in one case, Lot beholds the plain; in the other, Abraham looks toward all the land of the plain and sees the smoke of the doomed cities rising up into the sky; and it may be added that he could not have seen more if the cities had been at the southern end of the lake, for it is not visible either from the neighbourhood of Hebron or Râmet el-Khalil.*

I would here refer those who wish to examine for themselves the question of the site of Sodom and Gomorrah to the exhaustive article on Sodom in Smith's "Dictionary of the Bible," by Mr. Grove, who was, I believe, the first to advocate the northern position of the "cities of the plain."

It is not intended in the present notice to discuss the nature of the catastrophe by which the cities perished, but it cannot be too often mentioned that there is no ground for the popular belief that the cities lie beneath the waters of the Dead Sea. It is distinctly stated in the Bible that fire was the agent of destruction; and Monsieur Lartet, in his able paper on the "Geology of the Dead Sea," has clearly shown that the country must have assumed its present form long before the advent of man upon the earth, and that the water of the lake at one time extended far up the Jordan Valley, gradually falling till it reached its present level, and the evaporation and supply were equalised.

* The traditional place where Abram is said to have stood before Jehovah is Beni Naim, about five miles east of Hebron.

A few words may here be said on the ruins in the neighbourhood of Beitin; the first, a prominent object from the village, is the Burj or Castle of Beitin; this was once a fortified church, the church lying within a square enclosure, round the sides of which were chambers similar to those attached to the church erected by Justinian on Mount Gerizim. Many fragments of columns, capitals, lintels, &c., are built into the walls of the modern tower and of the vineyards round it. To the north-east of Beitin are some extensive ruins called Deir Shebba* or Shebat, covering a large amount of ground on both sides of one of the ravines falling to the Jordan: they consist of foundations of roughly-dressed stones, and in one place of some shafts of columns. The name may be connected with that of Sheikh Sheban, whose tomb is shown on the side of the wady on which Beitin stands. Some distance below the village, and lower down the same valley, westward from Michmash and not far from Et-Tel (Ai), are some ruins called Khurbet An, possibly the site of Beth-aven, which must have been somewhere in the vicinity. At Beitin itself there are no ruins of consequence exposed to view, but the village stands on heaps of rubbish which may conceal interesting relics of the time when the golden calf was worshipped at Bethel. In the valley close by are the rock-hewn tombs out of which Josiah took the bones which he burned on the altar, "according to the word of the Lord which the man of God proclaimed;" but we could find no trace of that title which once marked the resting-place of the disobedient prophet. From the hill above Beitin the traveller going north catches his last view of Jerusalem, and it is curious to think that if the Temple stood there, as it may well have done, the kings of Israel, when they went up to worship the golden calf at Bethel, must often have seen the walls and porches of Solomon's Temple glittering in the bright sunlight. C. W. Wilson.

December 12, 1869.

RESULTS OF METEOROLOGICAL OBSERVATIONS TAKEN AT BEYROUT, SYRIA, FROM THE YEAR 1845 TO 1854.

BY JAMES GLAISHER, F.R.S., ETC., FROM OBSERVATIONS BY HENRY HEALD, ESQ., AS FURNISHED BY G. JACKSON ELDRIDGE, ESQ., H.B.M.'S CONSUL-GENERAL IN SYRIA.

From the year 1845 to the year 1854, meteorological observations were taken at Beyrout, by Henry Heald, Esq., and from the registers the observations have been made regularly and carefully kept. From them Mr. Jackson Eldridge, our consul-general in Syria, has extracted the monthly mean temperature at the times of observation, viz.:—8.30 A.M., Noon, and 6 P.M., together with the maximum and minimum reading as found at the times of reading, in every month, and all the observations

* Can this be a trace of the name Shebarim, mentioned in connexion with Ai in Josh. vii. 5? [G.]

recorded with respect to the direction of the wind and the state of the weather.

By taking the means of the three results in each month thus furnished, the first of the following tables was formed. These numbers may be considered to represent a moderately close approximation to the mean temperature of each month in each year; and in the last column the mean temperature of each month as found from all the years.

By comparing the numbers in each month with those in the last column, it will be seen how much any month may depart from its average value, either in excess or defect; thus January, 1849, the coldest January, was 1° 7′ below the average; and in 1853, the warmest January of the group was 2° 0′ above the average, and thus the temperature of one January has differed from that in another by 3° 7′.

In like manner the departure of temperature from the average, and range of temperature, may be found in each month. The month whose temperature seems to be the most uniform is August, and least so February. The coldest month in the season is February in the year 1849, and the warmest in July 1847: the difference of temperature between those two months was 35° 3′.

TABLE showing the Monthly Mean Temperature at Beyrout for ten years, 1845—1854, from daily observations taken at 8.30 a.m., noon, and 6 p.m.

Months.	Years.										Mean temp. of each Month.
	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
January...	58·3	57·2	56·7	58·2	55·6	56·0	56·1	56·3	59·3	59 1	57·3
February ..	60·7	58·8	59·7	59.0	53·6	54·8	56·4	60·0	65·4	57·6	58·6
March ...	66·1	62·7	64·7	61·8	61·7	61·1	62·4	60·3	64·6	57·8	63·3
April	68·0	68·3	68·5	66·1	71·6	65 9	69·4	66·5	66·4	62·7	67·3
May	73·4	73·0	74·2	71·4	72·4	72·2	78·0	72·3	74·1	72·2	73·3
June	77·2	77·9	79·5	...	78·6	77·4	77·2	77·2	79·7	78·5	78·1
July	...	82·1	88·9	...	82·3	81·6	81·1	82·0	82·7	83·0	83·0
August ...	...	82·7	83·1	...	83·4	84·0	82·5	83·5	84·1	83·7	83·4
September	...	81·0	82·0	81·8	80·9	81·5	81·3	81·4	83·9	80·2	81·6
October...	...	77·7	76·4	...	77·8	77·0	77·2	79·4	79·6	77·0	77·8
November	...	63·7	66·6	6 59	69·5	65·7	70·6	68·3	67·9	69·6	67·6
December	...	64·1	60·4	...	61·8	57·8	58·5	62·7	63·0	64·0	61·5
Sums ...	...	70·8	71·7	...	70·3	69·6	70·9	70·8	72·6	70·4	71·1

The coldest month on the average is January; February is 1° 3′ warmer; then till June the temperature increases about 4° or 5°, from month to month. The month of highest temperature is August, differing but 4′ from July; September is $1\frac{3}{4}$° of lower temperature than August; a decline of 3° 8′ takes place from September to October; the greatest change from month to month takes place from October to November, the latter month being no less than 10° colder than the former.

The rapid decline is then checked, but is from 4° to 6° to the coldest month, viz., January.

The numbers in the bottom line show the mean temperature of each year, and the mean of all the years. The coldest year was 1850, being 1° 5 below the average; and the warmest was 1853, being as much above; the range of mean yearly temperature in these ten years was 3°. By taking the difference between the numbers in the last column and the mean of all, the excess or defect of temperature of each month above the mean of the year is seen; thus, August, the warmest month, appears to be 12° 3 above, and January, the coldest, to be 13° 8 below the mean of the year; the sum of these numbers shows the difference of monthly mean temperature to be as large as 26° 1, being the difference of mean temperature of January and August.

From the maximum and minimum readings in each month the next table was formed :—

TABLE showing the extreme Monthly Range of Day Temperature at Beyrout for the ten years 1845—1854, between the hours of 8½ a.m. and 6 p.m.

Months.	Years.										Mean monthly range of extreme day temperature.
	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
January	8·5	12·0	11·0	15·0	14·5	21·0	14·0	7·0	11·0	15·0	12·9
February	12·0	11·0	19·0	15·0	15·0	19·0	12·0	13·0	23·0	15·0	15·4
March	19·0	20·0	24·0	29·0	21·0	21·0	17·0	21·0	20·0	26·0	21·8
April	23·0	16·0	11·0	34·0	19·0	17·0	13·0	15·0	12·0	24·0	18·4
May	24·0	13·0	12·0	14·0	15·0	14·0	13·0	26·0	14·0	10·0	15·5
June	10·0	10·0	11·0	...	14·0	8·0	10·0	8·0	5·0	9·0	9·4
July	...	7·0	8·0	...	7·0	5·5	8·0	7·5	5·0	5·0	6·6
August	...	6·0	6·0	...	6·0	5·5	5·0	6·0	5·0	5·0	5·6
September	...	6·0	9·0	9·0	9·0	8·5	5·0	9·0	8·0	10·0	8·2
October	...	12·0	12·0	...	11·0	12·5	15·0	8·0	13·0	13 0	12·1
November	...	17·0	16·0	5·0	17·0	25·5	11 0	11·0	10·0	15·0	14·2
December	...	15·0	18·0	...	11·0	17·0	17·0	11·0	10·0	9·0	13·5
Sums.	...	12·1	13·1	...	12·5	14·5	11·7	11·9	11·3	13·0	12·8

The numbers in this table show a considerable range of temperature, when it is considered that no night or really minimum temperatures are included. The largest is in April 1848; the next in order is 29°, in March of the same year; and from the numbers in the last column, these two months seem to be subject to the largest daily changes of temperature. The months of smallest change are July and August. The average for each year, and the mean from all the years are shown in the bottom line of the table.

From the same register Mr. Eldridge carefully extracted the dates of the first and last rain of the season; and when no rain is mentioned, it is to be understood that no rain fell during the month.

TABLE showing the number of days on which rain fell during each month in the ten years 1845—1854.

Months.	Years.										Mean monthly number.
	1845.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	
January..... ..	7	15	14	15	12	13	7	8	10	9	11
February	7	10	8	9	20	9	11	7	4	21	11
March	7	4	8	13	9	5	3	15	14	13	9
April	3	3	6	1	4	6	0	7	7	8	5
May	1	1	0	6	3	3	0	3	1	1	2
June	1	2	0	...	2	1	4	1	0	1	1
July	...	1	0	...	0	0	1	0	0	0	0
August	...	4	0	...	0	3	0	0	0	1	1
September ...	...	0	1	...	4	2	0	3	0	0	1
October	...	3	3	...	6	3	2	2	4	4	3
November	...	11	7	3	7	11	1	12	6	6	7
December	...	3	15	...	7	13	26	11	14	6	12
Sums.....	...	57	62	....	74	69	55	69	60	70	63

From this table we learn that at times rain falls more frequently than was expected. In the month of December, 1851, it fell more or less on twenty-six days. In the months of December to March, it falls, on an average, about one day in three; in November, about one day in four; in April, one day in six; in May and October, one day in fifteen or ten respectively. In the months June to September is the almost rainless period, but there is really no month quite free from rain; in July the driest month, rain fell on one day in the year 1846, and on one day in the year 1851.

The average number of days of rainfall in the year is sixty-three; in the year 1851, the number was fifty-five; and in 1849, was seventy-four days.

From the information furnished with respect to the deviation of the wind the following table has been formed:—

Thunderstorms occurred in 1845, once in January, then none for two years; there were, three in 1848, and one in January; six in 1849, of which two were in the month of January, November, and December; there were seven in 1850, four in February, two in November, and one in December; there were six in 1851, one in October, one in November, and four in December; there were four in 1852, two in January, and two in November; there were seven in 1853, two in each month of January, October, and November, and one in February; and there were none in the year 1854. Then there were thirty-four storms in ten years, of which ten were in

January, five in February, three in October, nine in November, and seven in December, and none in the months of March to September, both inclusive.

A severe shock of earthquake was felt on February 21st, 1845.

TABLE showing the General Direction of the Wind in each month, as found from all the years.

Months.	Summary of the Wind.								
	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
January (1845—1854)	49	13	...	..	37	104	73	26	...
February „ „	44	2	2	11	42	77	67	38	1
March (1846—1853)	73	8	4	1	26	58	38	15	2
April (1846—1854)	62	6	1	3	20	77	86	15	2
May „ „	75	29	...	5	14	57	63	30	...
June „ „	39	1	...	...	3	78	81	36	1
July „ „	11	3	...	...	5	71	116	39	3
August (1846-47—1849-54)	20	...	...	...	8	88	70	60	...
September „ „	61	...	...	...	26	28	79	39	1
October „ „	76	27	...	...	11	20	54	56	...
November „ „	57	11	8	...	5	30	72	51	...
December „ „	58	5	2	4	19	60	78	22	...

From the large numbers in this table ranging themselves under S. and W., or compounds of these winds, it is evident they are the predominating winds in every month of the year. The N. wind, though not unusual except in July and August, as shown by the numbers in the first column, had few compounds with the east, as shown in the next three columns. The winds of least prevalence are from the east and south-east.

The cholera was at Beyrout in 1848, from August 22nd to August 31st.

Locusts appeared in 1845, on April 13.

The sirocco, or dry wind, was experienced in 1845, on February 5, and on May 12 and 13; in 1846, on January 17; in 1848, on March 6; in 1850, March 14 to 26, and May 19, 20, and 21; in 1851, on April 6; in 1852, on April 11, 12, May 8 to 11; in 1853, February 20, 26, and one day in April; and in 1854, on April 25, 26, June 10, 11, November 10, December 30 and 31.

Mr. Eldridge remarks that Mr. Heald kept the registers more as an amusement than for scientific purposes, and that many of the interesting phenomena of nature no doubt have escaped notice; yet these results are the most connected, and yield most valuable information respecting the climate. It is to be regretted that the falls of rain have not been registered; but we know from the recent observations there made that very heavy falls of rain take place in the month distinguished by the most frequent falls. (See No. 3, *Quarterly Statement*, p. 104, "Table of Meteorological Observations taken at Beyrout."

The following tables contain the result of observations furnished from the places named:—

The following are the Means deduced from Observations taken at JAFFA, GAZA, and NAZARETH, in SYRIA, and forwarded by T. Chaplin, Esq., M.D.

Name of Station and Observer.	Year and Month.	Barometer A.M. & Noon.		Temp. of Air in Month. 9 A.M.						Approx. Mean Temp. from Max. and Min.	Mean Temp. at 9 A.M.			Vapour.			Mean Degree of Humidity (Sat.=100).	Mean Weight of a Cubic Foot of Air.	Rain.	
		Mean reduced to 32 deg.	Range.	Highest.	Lowest.	Range.	Mean. Of all Highest.	Mean. Of all Lowest.	Mean. Daily Range.		Dry Bulb.	Wet Bulb.	Dew Point.	Elastic Force.	In a Cubic Foot of Air. Mean.	In a Cubic Foot of Air. Short of Saturation.			Number of Days it fell.	Amount collected.
		in.	in.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	in.	grs.	grs.		grs.		in.
JAFFA, SYRIA.	1868.																			
H. A. Kayat, Esq., H.B.M.'s Vice-Consul.	Sept.	28·64	0·15	85·5	67·5	18·0	81·6	70·7	10·9	76·1	79·3	73·9	70·2	·740	7·9	2·8	79	489	2	1·25
	Oct.	28·67	0·25	94·7	61·7	33·0	80·9	66·1	14·8	73·5	76·7	71·7	68·2	·690	7·5	2·5	75	492	2	1·45
	1869.																			
	Jany.	28·78	0·40	68·7	40·0	28·7	60·8	50·4	10·4	55·6	56·5	55·1	53·8	·414	4·6	0·5	90	515	7	8·14
	Feb.	28·84	0·35	69·5	40·0	29·5	61·0	50·1	10·9	55·5	57·9	56·1	54·5	·425	4·6	0·8	89	515	3	3·86
	Mar.	28·68	0·30	71·7	48·5	23·2	64·9	53·5	11·4	59·2	63·0	61·7	60·6	·530	5·9	0·5	92	506	..	..
	April.	28·77	0·35	90·7	51·0	39·7	67·1	56·0	11·1	61·5	65·1	63·0	61·3	·542	6·0	0·8	87	506	4	2·50
	May.	28·70	0·29	89·0	54·0	35·0	72·6	61·3	11·3	66·9	70·9	70·0	69·3	·716	7·8	0·5	95	498	..	..
	June.	28·65	0·34	90·0	61·8	28·2	83·6	66·3	17·3	75·0	80·0	78·6	77·6	·946	10·2	0·8	93	488	..	..
	*July.	28·60	0·16	87·0	63·0	24·0	85·4	68·5	16·9	77·0	81·4	78·2	76·1	·900	9·5	2·0	84	486	..	..
	Aug.	28·59	0·26	91·0	63·5	27·5	87·8	70·2	17·6	79·0	83·9	80·4	78·1	·961	10·3	2·2	83	484	..	..
	1869.																			
GAZA, SYRIA.	April,	29·961	0·600	100·5	48·5	52·0	72·8	52·3	20·5	62·5	66·6	64 4	62·6	·569	6·3	0·9	86	525	3	1·84
Messsrs. Nimmo, Pickard, Cheetham.	May.	29·875	0·410	101·5	51·0	50·5	79·6	59·0	20·6	69·3	75·2	72·4	70·4	·744	8·1	1·4	85	514	..	..
	June.	29·873	0·450	99·0	62·0	37·0	87·8	66·4	21·4	77·1	82·7	78·1	75·1	·867	9·3	2·6	78	506	..	..
	July.	29·794	0·230	94·0	64·0	30·0	86·3	67·7	18·6	77·0	82·1	78·9	76·7	·919	9·9	1·9	84	505	..	..
NAZARETH, SYRIA.	May.	..	..	100·0	47·3	52·7	85·0	56·6	28·4	70·8	70·4	63·6	58·4	·489	5·3	2·8	65	..	2	0·48
Dr. P. K. Varton.	June.	..	..	108·0	60·7	47·3	90·1	66·1	24·0	78·1	77·7	72·1	68·2	·690	7·5	2·8	72	..	..	..

* Observations only taken on fifteen days, viz., 1st to 3rd, and 20th to 31st.

N.B.—The BAROMETER OBSERVATIONS only relate to 9 A.M. and Noon.
JAFFA, Latitude 32° 0′ N.; Longitude 34° 35′ E.
NAZARETH, ,, 32° 43 N.; ,, 35° 19 E.

JAMES GLAISHER.

The following are the Means deduced from Observations taken at Beyrout and Alieh.

Name of Station.	Year and Month.	Barometer.				Temperature of Air in Month.						Approx. Mean Temperature from Maximum and Minimum.	Mean temp. at 9 a.m. & 10 p.m.			Vapour.			Mean Degree of Humidity. Saturation=100.	Mean Weight of a Cubic Foot of Air.	Wind.					Rain.	
									Mean.							Elastic Force.	In a Cubic Foot of Air.				Estimated Strength.	Relative proportion of.				Number of Days it fell.	Amount collected.
		Highest reading.	Lowest reading.	Monthly range.	Mean reduced to 32°.	Highest.	Lowest.	Monthly Range.	Of all Highest.	Of all Lowest.	Daily Range.		Dry Bulb.	Wet Bulb.	Dew Point.		Mean.	Short of Saturation.				North.	East.	South.	West.		
	1869.	in.	in.	in.	in.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.												in.
Beyrout, Syria.	Aug.	29·92	29·60	·32	29·62	87·5	77·0	10·5	85·4	79·1	6·3	82·3	82·0	..	..	..	..	..	..	..	1·0	6	0	10	15	0	0·00
	Sept.	29·98	29·72	·26	29·69	87·0	71·0	16·0	82·8	76·1	6·7	79·5	79·4	73·0	68·6	·699	7·5	3·2	69	507	0·9	12	2	6	10	2	0·46
	Oct.	30·14	29·84	·30	29·87	82·0	68·5	13·5	77·9	71·3	6·6	74·6	74·1	69·8	66·7	·655	7·1	2·0	78	516	0·5	11	2	6	12	1	0·16
Aleih, Mount Lebanon	1869.																										
	Aug.	27·20	26·97	·23	26·98	86·0	58·0	28·0	77·1	69·7	7·4	73·4	73·6	66.5	61·3	·543	5·9	3·1	66	467	0·5	9	5	4	13	0	0·00
	Sept.	27·26	27·02	·24	27·04	84·5	57·5	27·0	74·2	64·0	10·2	69·1	67·6	60·1	54·2	·421	4·6	2·8	62	475	0·6	11	4	7	8	0	0·12
	Oct.	27·34	27·16	·18	27·17	83·0	53·0	30·0	72·6	58·2	14·4	65·4	67·0	56·6	48·3	·339	3·7	3·6	51	478	0·9	6	9	11	5	2	1·32

N.B.—Observations taken at 9 a.m and 10 p.m.

NOTES.

August.—Aleih—The heat from the 15th to the 23rd was unusually great.

September.—Beyrout, 11th—Lightning from N. at about 10 p.m.
,, 26th—Lightning from N.W. and S. with thunder, at 9 p.m.

Aleih, 11th—Lightning to N. in the evening; a few drops of rain fell at 9 p.m.
,, 21st—Temperature varied much during the day.

September.—Aleih, 26th—Showery from about 3 a.m. till midnight. Thunder in evening.

October.—Aleih, 7th—Lightning to N.W. about 8 p.m.
,, 8th—Showers preceded by thunder commenced at 10 a.m.
,, 9th, 10th—Rain fell during nearly the whole night.

Errata.—In the "Quarterly Statement" Nos. II. and III. Olieh should read Aleih.

In the "Quarterly Statement" No. II. Maximum Reading of No. 1 Barometer for August should read 27·18 in, instead of 27·78.

JAMES GLAISHER.

THE DESERT OF THE TIH.

A LINE drawn from the ancient port of Gaza, on the Mediterranean, through the wells called Bir-es-seba, the site of Beersheba, to the entrance of Wady el-Jeib, at the southern extremity of the Dead Sea, cuts off the northern part of the Holy Land, where towns and villages are found, from the southern part, which is almost wholly devoid of such habitations.

The latter section is naturally divisible into three parts, viz., 1, Sinai; 2, the Desert of et-Tîh, the scene of the Wanderings of the Children of Israel; 3, the Negeb, or "south country" of the Bible, where Abraham, Isaac, and Jacob dwelt.

The attention which it is well known has recently been paid with so much success to the exploration and partial survey of Sinai, is now being followed up by an examination, by Mr. Palmer and Mr. Drake, under the auspices of the Palestine Exploration Fund, of the Desert of et-Tîh and the Negeb, with a view to the further elucidation of the scenes in which the patriarchs Abraham, Isaac, and Jacob dwelt, and of the desert where the children of Israel spent forty years in consequence of their revolt at Kadesh. The tract in question is in some parts entirely unknown, and its exploration has now become more than ever a desideratum in the various branches of science.

The Desert of et-Tîh is a limestone plateau of irregular surface, having the Peninsula of Sinai on the south, with the Mediterranean Sea and the Promised Land on the north. Just as Sinai projects wedge-shaped into the Red Sea between the gulfs of Suez and Akaba, so does the Tîh advance with steep escarpments into the peninsula. On one side the edge of the plateau runs nearly parallel with the Gulf of Suez, and skirting the isthmus, not far eastward of the new ship canal, is gradually lost in the desert plain which borders the Mediterranean Sea.

On the other side in like manner the edge of the plateau faces the Gulf of Akaba, and continues in the same direction to skirt the Wady el-Arabah, which separates the gulf from the Dead Sea and the Jordan valley. On this side the desert plateau is terminated on the north by the hilly country which, extending through the whole length of the Promised Land, commences about 50 miles south of the Mediterranean Sea. It forms a well-defined limit of the desert, and is described by Dr. Robinson as rising like a wall from the desert plain, with the remarkable cone of Jebel 'Arâif on the west, and the cliff of el-Mukrah on the east.

This hilly region, as far as Beersheba, includes the Negeb, or "South land" of the Bible, with the upland pastures of Gerar, where Abraham, Isaac, and Jacob fed their flocks, and held personal intercourse with the Almighty. It was afterwards inhabited by the Amalekites, in later times by the Idumeans, and now by the Azazimeh, the Saidiyeh, and the Dhullam Arabs. The Azazimeh country is the most southerly, and quite unknown. Near the cliff Mukrah, an ancient road is supposed to have

passed between Gaza and the Gulf of Akaba, with a branch to Hebron. Here, too, at its base, on the verge of Paran or the Tîh, and of Zin or the Arabah, some critics place Kadesh; one of the most hotly contested sites in Biblical investigation, and the settlement of which is much to be desired. The other positions of most importance in the controversy, are Dr. Robinson's Ain el-Weibeh, in the Arabah; and Mr. Rowland's Ain el Kudeirah, or Kudes, among the valleys on the west.

Just as Sinai projects into the Red Sea, and as the Tîh projects into Sinai, so does the Negeb advance into the Tîh. For on the west the desert skirts the hill country northwards from Jebel 'Arâif up to Beersheba and Gaza, where the Wady Suny serves for a boundary, dividing the barren waste from the Shefelah, or fertile plain of Philistia. On the east the plateau of the Tîh runs up beyond the cliff of el-Mukrah, towards the Dead Sea, in the form of a narrow terrace, between the eastern base of the hill country and the great Wady el-Arabah.

In proceeding northwards from the Gulf of Akaba, the traveller ascends a succession of terraces, the first of which is the Tîh itself, and the next is the hill country of the Azazimeh. This is succeeded by a third, which rises precipitously from the second terrace up a vast inclined plane of a thousand feet in height, and very steep. It is traversed by the Nukb, or pass of es-Sufâ, and also nearer the Dead Sea by the pass of ez-Zuweirah, both well described by Dr. Robinson. On this third terrace are the ruins of Thamara (Kurnub), Aroer (Arara), and Arad. It is inhabited by Dhullâm and Saidiyeh Arabs. Its western side is formed by Jebel Rakmah, behind which Dr. Stewart saw from Beersheba the top of another range, called Ras Tareibeh, but neither of these ranges have been explored. A valley of considerable extent, called Wady Murieh, is said to cross the high land at the foot of the third terrace, connecting Wady el-Ain on the west with Wady Fikreh on the east. It is at the western end of these valleys that Mr. Rowland places Kadesh. In the same neighbourhood are said to be the ruins of Eboda; and Jebel Maderah, which rises in a conical form out of Wady Murreh, is regarded by some as Mount Hor.

The distance from Hebron or Gaza to the cliff of el-Mukrah, the southern extremity of the hill country, is about 70 geographical miles in direct lines. The width of the hill country is about 30 geographical miles. Up to the present time it has only been crossed by travellers hurrying on to Hebron, Petra, or Sinai. It is with the view of attracting more than a passing glance to this home of the Patriarchs, and threshold of the Promised Land, as well as to define its relations to the Desert of et-Tîh, that these brief remarks have been made. Until it is exhaustively studied, the situation of Kadesh must remain in doubt, and that is the key to the movements of the Israelites after they departed from Sinai. It was their third resting-place beyond Sinai. They came to Kadesh, unto the mountain of the Amorites, in the wilderness of Paran, and near to the wilderness of Zin, eleven days' journey from Horeb. There the people remained while the spies "ascended by the

south, and came unto Hebron," searching the land from the wilderness of Zin unto Rehob. There Miriam died. There Moses smote the rock and the water came out abundantly, but, sinning in the act, he was denied admission into the Promised Land. From thence, after sojourning forty years in the wilderness, the Israelites departed on their way to Canaan, and came to Mount Hor, where Aaron died.

Turning now to the Tîh itself, the first point that invites examination on approaching it from Sinai is the nature of its southern limit, and the passes which cross it. Beyond the names of Jebel er-Rahab, Jebel et-Tîh, Jebel Ojmeh, and Jebel Dhelel, as divisions of the range, together with certain prominent points seen at a distance, as Tas et-Sudr and Jebel Wardan, as well as the passes of er-Rakineh, Wursah, and Murcikhy, there is but little to be found that deserves the name of accurate description or delineation. The south-eastern edge is perhaps worse defined than the south-western; indeed, there is scarcely anything definite known about the former.

The surface of the plateau itself, although traversed by the route of the Egyptian caravan to Mecca, and often crossed by travellers, has never been systematically explored. It is for the most part drained by the Wady el-Arish into the Mediterranean, and by the Wady el-Jeib into the Dead Sea. But although many branches of those great watercourses are delineated and named on such a map as Robinson's, yet nobody has yet attempted to trace any one of them throughout, and the entire outline will certainly be found very inaccurate. Still more imperfect is the orography of the plateau. It is known to be diversified by various elevated groups and ranges, but only passing glances have been bestowed upon them. Russegger, in 1838, threw light upon the subject by his observations for general elevation and geology, but no one has yet attempted to deal with it in detail.

Perhaps the most interesting inquiry about this plateau, in a Biblical point of view, is as to its capacity for sustaining a considerable population under such conditions as it now presents, and under such other conditions as may appear to have existed in former times. Robinson's rapid journey across the eastern corner of the plateau enabled him to ascertain the names of the tribes now inhabiting the entire plateau, viz., the Haiwât, the Tiyahah, and the Terâbin. The Terâbin appear to be of the chief importance, and to be very rich in flocks and herds. They inhabit the western side of the plateau from Jebel or Rahab to Gaza, and their head-quarters are said to be near Tâs et-Sudr. The Tiyahah occupy the centre in two divisions, and are in alliance with the Terâbin. The Haiwât inhabit the eastern part. Besides this meagre information, very little is known of these tribes.

The examination of the Tîh, or Wilderness of the Wanderings, including, it is to be hoped, the highlands of the Azazimeh, Saidiyeh, and Dhullâm, by Mr. E. H. Palmer and Mr. C. F. Tyrwhitt Drake, cannot fail to throw much new light on this interesting region. The familiarity of the former with the Arabic tongue, and the experience of the latter as

a naturalist, are excellent qualifications for the work. Mr. Palmer will, at all events, give us a full account of the people, their history, numbers, organisation, manners, customs, and traditions. Through these inquiries, some light may perhaps be thrown upon the Israelite stations in Numbers xxxiii. It would have been satisfactory to have found an experienced surveyor among the party, but this deficiency may be counterbalanced by a systematic examination of the ground, coupled with such an itinerary as Dr. Robinson supplies in his "Biblical Researches."

T. S.

NOTES ON A VISIT TO SAIDA IN JULY, 1869.

BY CAPTAIN WARREN, R.E.

The journey up from Jerusalem to Beyrout, overland, in the summer time, has two advantages to those who can enjoy riding in the full blaze of a Syrian sun for several hours every day.

1st. The days being so much longer and the roads dry, a journey that takes the whole day in winter can be accomplished by noon.

2nd. All the under-vegetation being burnt up, any architectural remains can be examined without difficulty.

Starting on 11th July from near Jerusalem, without tents, and provided with letters to the several Turkish governors, and (through the kindness of M. Ganneau) with introductions to the various Latin convents, I arrived at Beyrout in eight days, including one day's detention at Saida.

On the second day, at Jenîn, midway between Nablûs and Nazareth, we found no accommodation whatever; but, the soldiers having lately moved down to Beisan (where a block house has been built), we were able to get possession of the chief room in the deserted serai.

We arrived at Nazareth on the third morning about eleven o'clock. I paid a visit to Dr. Varton, to whom Dr. Chaplin has confided the care of the meteorological instruments of the Palestine Exploration Fund at this station. It is gratifying to see how much interest he takes in this work; and it would be very desirable to send some more mercurial barometers out to Jerusalem, so that Dr. Chaplin could supply Nazareth and Gaza.

The observations at the two hill-stations, Jerusalem and Nazareth, as compared with those at Jaffa and Gaza, will be of great interest; as will these again compared with those taken by Mr. Eldridge in the totally different climate of Beyrout and the Lebanon.

I understand that observations were taken at Saida by the American missionaries for several years. It would be desirable to obtain permission to examine these, and publish what would be useful.

Next day, from Nazareth early, I passed Sefurieh. There are several interesting remains about this town. I examined the square tower at the top of the hill, and do not think the lower stones are *in situ;* they have sunken marginal drafts, and some stones are 2ft. 6in. in height and 4ft.

in length, but they are somewhat carelessly worked, and very inferior to those in the Haram Area at Jerusalem. It was interesting to find a Phœnician sarcophagus used as one of the corner-stones of this tower. I enclose a sketch of it, and also of a pedestal lying near. Passing on through Kana-el-jelil and Jafat (Jotopata), I arrived early in the day at Akka, and paid a visit to the pasha: he was extremely obliging, and gave me orders for visiting every place in the city. I was very much struck with the air of bustle and stir about Akka after Jerusalem. The Turks and Arabs are certainly moving on in this part of the empire. At Jerusalem, Nablous, and Akka they are extensively repairing the serais of the pashas; but, at the latter place, the people have led the way by repairing the mosque, and (putting aside the nature of the style) it is really very thoroughly repaired. The change after the neglected, dilapidated Haram Area of Jerusalem to this little compact mosque of Akka is complete: the interior of the building new and clean, the floor carefully covered with new matting, the court outside well paved and swept, the fountains flowing with water, and the whole area filled with palm and other trees, so as to have a shade all round, and giving a charming air to the little place.

The master-gunner of the garrison took me all round the city walls. He appeared to have a peculiar satisfaction in showing every place which had been damaged by the English or French. It was rather disagreeable to see the waves dashing into breaches in the walls made so many years ago; but yet it shows a higher state of vitality when the mosques and houses are repaired in preference to the city walls.

Next morning I was much interested in the aqueduct which should carry water into Akka. Half-a-mile before reaching the city it has occasion to cross a hollow piece of ground; the water is carried along in two earthenware pipes on the surface of the ground; and at intervals it is forced up hollow columns of masonry open at the top, so that a minimum pressure, due to the height of the column, is exerted upon the pipes. Unfortunately one of these columns is out of order, and the water, in a stream sufficient to supply a city double the size of Akka, only serves to irrigate a little piece of meadow land.

I had been told by Dr. Barclay to look out for a solitary column on a hill to the right, somewhere near Neby Daood, and went over to a village in that direction to inquire about it. With one exception, the people gave evasive answers, and roundly abused the only man who seemed inclined to be communicative. I have found before, in the plain of Philistia, that the people are more suspicious and less frank than the mountaineers; and that the only way to get information out of them is to make assertions, when they will contradict you if you are wrong. We had to leave the place without finding what we wanted; but a man followed us, and, as soon as he was out of sight of his comrades, told us that the only large standing column was at Hamsin. As we rode on we saw it standing up by itself on the top of a small hill, and, on examination, I found it to be the same as is spoken of in Dr. Thomson's "Land of Israel," page 83.

I send a sketch of it, with the mouldings; the dimensions were not accurately taken: the capital I could not find, but there is a twelfth stone of the column lying near.

Passing the Rasel-Abiad, the Scala Tyriorum (where the path has now been made quite easy), there is on the right the village of Monsûrah, where I have been told, recently, a small pyramid of black stone has been found, apparently to commemorate some victory. This stone is said to have a square base, the sides being equilateral triangles: no inscription was found on it.

We passed out of our way again to visit "Hiram's Tomb," as I was anxious to see if there were any masons' marks on the stone. I could see only two: one is a Christian cross of the Byzantine type at the western end, of which I have got a squeeze; it appears to be ancient. The other consists of a square and compasses, very recently and rudely cut, apparently by some enthusiastic "mason," who should have learnt the *proper* use of his chisel before he attempted such a task.

We did not arrive at Tyre until after sunset, and, having to get into Saida early next day, I had to leave without examining the old walls.

After passing the Nahr-el-Kasimiyeh about one hour, and when opposite to Neby Sûr (called by a fellah there Neby Tûr), I noticed on the left, close to the sea-beach, some upright stones, and on coming up to them found them to form a rectangle, the sides nearly facing the cardinal points of the compass. The stones stand about four feet above the surface (see plan), and are about two feet by one foot thick; they stand nearly upright, and are from six to eight feet apart; about twenty feet to the east is one solitary stone; the north-west portion of the rectangle is wanting. The story given was that they had been men turned into stone by the curses of Neby Tûr. I was struck by the fellah calling the Neby "Tûr," because he called the city "Sûr."

In the "Handbook for Syria" (Ed. 1868), we find, page 375, "We observe on the right a circlet of upright stones, to which a curious legend is attached," &c. It is probable that it is this rectangle that is referred to, since at a short distance the stones appear as though in a circle.

Saida is described in "Robinson's Biblical Researches":—The houses and city walls are built of freestone ashlar, said to be dug up, for the most part, from ruins existing at a few feet below the surface, in the vicinity of the city. Some of the stones in the walls of the private houses have incised characters on them; on one house I noticed three stones about twelve feet from the ground, each with a mark like the Phœnician aleph.

On making inquiries, I could not hear of any sunken marginal-drafted or "bevelled" stones having been dug up; the old stones appear to be squared, or ashlar, without a conspicuous draft.

In the castle or citadel which is above the city, the older portion of the wall (ascribed to Louis IX., A.D. 1253) is of two constructions: one portion is built of very small ashlar, and on it I could see no characters cut;

on the other portion, which may be of the same age, but is built of old material, I observed three or four characters, two of them, a cross and an arrow, high up out of reach; but close to the ground was a triangle, *in course of construction*, which is probably completed by this time, if the artist engaged on it has kept to his work. The stones of this portion are about twenty-two inches long, and thirteen inches high; two or three only of the stones have any marginal draft.

I could see no characters on the stones of the inside walls of this upper castle, but I here only made a very hurried examination. In the sea-castle the walls are evidently of very different ages, but none of the visible portions appear to have been built before our era, and there appear some reasons to suppose that the older portions may have been constructed by the Moslems, or in the time of the Crusades; for example, in one portion of what appear to be the older walls, huge granite columns are used as through bonds, just in the same way as they are at Ascalon and Cæsarea, and in the upper part of the east wall of the Haram area at Jerusalem.

If, however, we were certain that the older visible walls of this castle were built by the Moslems or Crusaders, there would still be the probability that the present stones, as they now appear, were used in the latter days of the Roman Empire, and that they may have been used previously in another form at an earlier period, for there is an arched doorway, very well preserved (of which an elevation is given), which is very similar in its details to examples of Roman architecture (rustic work) given by Vitruvius, and the stones generally, in their bevel, appear to be of a Roman type. The impression I obtained from the two visits I paid to the castle is, that the stones were at one time ashlar, without a draft, and probably with the present Phœnician marks on them; that they were cut down in the time of the Roman occupation of the city, and the marginal draft was then sunk and the bevel cut; and that again they were used at a later period, without being reworked, by the Moslems or Christians.

I have, however, to remark that, in some cases, what appear to be modern buildings abut against the old walls, and have preserved portions of them in a manner that is very surprising, if we are to suppose them to be of very great antiquity.

The stones in the older portions of this castle are "bevelled," but they differ very much from those at Jerusalem, to which the term "bevel" does not appear appropriate. They (at Saida) are formed by sinking a draft about two inches deep round the margin, and then bevelling off the projecting face at an angle of 45°. In some cases it appeared as though the draft and bevel had been cut over a portion of the Phœnician sign.

In comparing, however, the bevelled stones of Saida with those of Jerusalem, the difference in the nature of the stone must not be forgotten; a draft sunk only from a quarter to three-sixteenths of an inch, similar to those on the stones of the Haram esh-Sherîf, would appear very insignificant on the open freestone of Saida, and would probably be worn away in a very few years if exposed to the weather.

Dr. Thomson, at page 158, of "The Land and the Book," gives some

very interesting particulars upon this subject, some of which I take the liberty of quoting:—

"Most of the towns along the Syrian coast, however, are built of an argillaceous sandstone, mixed with comminuted shell, which, though porous and easily cut, will yet, if protected from the weather, last for ages; but, when exposed, it disintegrates rapidly, and soon melts away to dust. This process is hastened every time the ruins are *worked over* for new buildings. The stones must always be re-cut before they are put into a wall, and, after being thus reduced two or three times, they become too small for use, are thrown into the fields, and quickly dissolve. . . . . In other places, where the material is compact limestone, and not subject to these causes of destruction, it is broken up and burnt to lime."

The larger visible stones in the sea-castle are generally under two feet in height, and about four feet in length; it is possible, however, that there may be much larger stones of a more ancient wall *in situ* in the thickness of the present walls, for on creeping through a broken portion of the northern wall overhanging the sea I found above my head a stone which measured quite 8ft. north and south, east and west, and I could see no signs of any joint. This stone, then, would be in keeping with those which still remain on the reef of rocks forming the ancient harbour, the largest of which measures about 11ft. by 12ft. and about five feet in height, and weighs about thirty-five tons. I could see no signs of any bevel or draft on the stones forming the *walls* of the harbour, although dowel holes cut in these stones and in the rocks are very distinct.

Mons. A. Durighello, the vice-consul for France, took a great deal of trouble in showing me what was most interesting at Saida, especially the Phœnician tombs in which so much has been found; but I was disappointed to find that the nature of the rock in which they are cut prevents their being finished off in any manner, and the sides in many cases have been coated with plaster, so that they now have a very dilapidated appearance.

I could neither see nor hear of any *red paint* marks on the plaster, similar to those we have found on the walls of the Haram esh-Sherîf. The sarcophagi are generally cut out of the solid mountain limestone (the tombs being sandstone) and have devices on them which I have seen in Palestine; at Sefûrieh, the sarcophagus built into the corner of the tower is very similar to those found in these tombs at Saida. There is the rectangle with the triangle at each end, and also the disc (sun?) with the band underneath; the device of the rectangle with the triangle at each end (see sketches) was also to be seen on the Phœnician sarcophagi near the river Damûr, and I have seen it in Palestine, more especially over a ruined bridge on the east side of the Jordan, where the Zerka issues into the plain above the ford of Damieh.

M. Durighello was kind enough also to show me all the little pieces of pottery which he had lately found in his excavations, and I noticed that they are precisely similar to what we find at Jerusalem in the middle of

our sections, below the early Christian pottery, and above the pottery found at the south-east angle of the Haram. I did not see any pottery similar to what has been lately found at Cyprus.

Mr. Arbela, the English consular-agent, was good enough to show me some columns he had found in his garden. Of one, the pedestal, base, and capital are lying together: on the pedestal is an inscription in Greek (of which I have an excellent squeeze), dedicated to the emperor Hadrian. The base is Attic, and the capital Corinthian. On the bed of the latter is the mason's sign or name, in Greek, incised, but it is difficult to make it out at present. I have a squeeze of it.

It is interesting to remark that there are incised marks on the walls of the city, showing where the aqueduct runs, in the shape of a round O: but this mark must be quite modern.

M. Durighello is going to preserve either squeezes of, or the stones themselves, which he finds in future in the ground bearing Phœnician marks. He took me to see the capital of a column lying in a mosque, of which he has the fellow in his possession. I forward you a sketch of it; it appears to be somewhat similar to the capital of one of the monoliths at the Golden Gate, Jerusalem.

I am able to send you about twenty of the characters from the sea-castle walls, reduced from squeezes, and about twenty more which I sketched.

On arriving at Beyrout I found that the consul-general, Mr. Eldridge, who was away on business, had very kindly made some preliminary arrangements about a house in the mountains, and I had no difficulty in securing it at once. C. W.

THE COLEOPTERA OF PALESTINE.

BY G. R CROTCH, ESQ., ASSISTANT-LIBRARIAN OF THE UNIVERSITY OF CAMBRIDGE.

On receiving, through the kindness of Lieutenant Warren, a small collection of *Coleoptera* from the environs of Jerusalem, he has suggested that a short account of these would not be unacceptable for the *Quarterly Statement*. It will be, I fear, however, almost impossible to extract much interest from a subject so little calculated to attract the general public. The *Coleopterous Fauna* of Palestine has received a fair share of attention of late years; the rich collections of M. de Saulcy, whose son is an ardent entomologist, laid the foundations of our knowledge; M. Peyron, long resident at Tarsus and at Beirout, has also enriched the French collections with many new and interesting species; M. Ancey, whose captures were described last year by the Abbé de Marseul, largely added to the list; and the immense collections of M. Piochard de la Boulerie, who has recently spent three months in Syria, bent solely on amassing *Coleoptera*, will, when examined, give a thorough idea of this interesting *fauna*. The species collected by the Rev. O. Pickard, Cambridge, when in company with the Rev. H. B. Tristram, were also of the highest interest; these an

another set collected by Mr. Lowne have recently passed through my hands; and a further set, limited unfortunately in number, collected by Mr. Palmer at Sinai, shows that the southern *fauna* is much more characteristic and novel than that of the more northern parts. The present expedition of Messrs. Drake and Palmer will, I hope, be very productive in this respect, as the former is an able and zealous naturalist, who has already made large collections in Morocco. The *fauna* itself has but few striking features, compared with that of the Mediterranean generally; there is a dearth of new or striking forms, compensated, it is true, by the very interesting modifications which nearly all the European species found there undergo. The dominant group, to the eye at least, is certainly the *Heteromera;* for such *genera* as *Pimelia, Blaps, Ocnera, Tentyria, Adesmia,* &c., seem to form the leading features of the country, present as they are in every burnt-up place, where it would seem impossible for them to obtain nourishment. The rapacious *Casabidæ* are much less strongly represented—the numbers not being great and the variety certainly small. The *water-beetles* are, from the arid nature of the country, rare, but abundant when found; several that I received from Mr. Palmer from Mount Sinai appear quite peculiar to that locality, whence they were described in 1832 by Klug in the "Symbolæ Physicæ" of Ehrenberg and others; a work replete with information for the Syrian *fauna,* and whose illustrations leave little to be desired. The third great division of beetles, called "*Staphylinidæ,*" are not apparently abundant; at least I have only received two or three species as yet; but M. de Saulcy, whose predilections are in favour of this group, was able to discover a number of minute and extremely interesting species, forming several new *genera,* especially some of the utmost interest inhabiting the nests of the different species of ants, under stones, and living with them, on what footing is difficult to discover, but certainly as intimate guests. Nearly all these species are minute, but present very curious modifications of structure, and are indeed often quite blind, though they find their way about with some rapidity. From these we pass to the great group called *Clavicornes* by Latreille, which is so largely developed in Central and Northern Europe, and whose office it is to remove all matter in a state of decomposition. The dryness of the climate prevents there being much demand for these; hence they are but poorly represented.

The group of *Lamellicornes,* the finest and best known group of *Coleoptera,* are abundant; the sacred beetle of the Egyptians (*Utenchus sacerd*) is present everywhere, and numerous smaller dung-beetles may be observed in almost incredible numbers fulfilling their vocation. The more beautiful flower-loving *Lamellicornes* are also abundant, two or three *Cetonias,* especially the pretty white-spotted *C. Næmi,* absolutely swarm; the purple and green *Amphicomas,* so beautifully clothed with hair (and so difficult to preserve), also occur in immense abundance on flowers, and in the most perplexing varieties. The group of *Buprestridæ,* the most brilliant of beetles, is poorly represented in species; some, however, as *Capnodis porosa,* occurring literally by hundreds. The beautiful genus *Tulodis,* scattered all over the European end of Asia, is

not well represented; the elegant covering of yellow dust-like pollen with which they are covered is removed with the least touch, and renders them almost impossible to preserve satisfactorily. The *Clateridæ* are few in number and unimportant. The flower-infesting *Malacoderms* are only just commencing to attract attention, but appear, to judge from Mr. Ancey's *Voyage*, to be abundant, and to contain many new forms. The *Heteromera* I have already spoken of as the great feature of the place. The second section, of more flower-loving habits, is also well represented, especially the numerous varieties of blister-beetles or *Cantharidæ*. The orange and black *Mylabris* are everywhere in flowers, and are most variable. The *Curculionidæ* are but little known, though furnishing some interesting *genera*. More remains to be done in this group than in any other; and throughout the world it is of incredible richness, more than 12,000 species being computed to exist in collections. The *Longicornes* are tolerably well represented, especially by the comparatively gigantic *Prioni*, but the beautifully striped genus *Dorcadion*, so characteristic of Asia Minor and Turkey, is scarcely represented here. The herbivorous *Phytophaga* are abundant, wherever there is vegetation, and will furnish many new species; two extremely curious species of *Cassida* discovered by M. Ancey have quite an exotic appearance.

The lady-birds or *Coccinellidæ* are not abundant or remarkable; the common seven-spotted species appears to occur there without change, and is in fact spread over half the world. From this brief sketch it will be seen that the *fauna* has altogether an European cast, and to obtain much strikingly novel, excursions must be made eastward and southward. The grand mountain district of the Lebanon, while furnishing some interesting things, is very poor compared to any of the mountains of Asia Minor, as the Taurus, &c., which absolutely teem with insect life.

In conclusion, I can only say that if any one who may read this has specimens of this group of insects from Mediterranean districts, I shall be most delighted to render any assistance in examining and naming the specimens.

Cambridge. G. R. Crotch.

REMARKS ON A VISIT TO 'AIN JIDY AND THE SOUTHERN SHORES OF THE DEAD SEA IN MIDSUMMER 1867.

BY CAPTAIN WARREN, R.E.

It being desirable to photograph several objects of interest in the southern shores of the Dead Sea, previous to the departure home of our photographer, an expedition was arranged. Our party consisted of Dr. Barclay, Mr. Eaton, myself, and Corporal Phillips (photographer).

Visits to this part of the Dead Sea had been hitherto made during the cold weather, and whether Franks could stand the heat in midsummer was quite a matter of conjecture; we knew that the Bedouin abandon the

lower shores at this season, and we went down fully prepared to beat a retreat if we found the heat too much for us. Many good friends endeavoured to deter us by evil prognostications, and conjured up horrors, by anticipation, on our road, sufficient to frighten a nervous person into a fever.

The ground about 'Ain Jidy belongs to the Resheidy, an insignificant little neutral tribe protected at present by the Ta'âmireh; and it was with a sheikh of the latter tribe that we were to make our agreement; he was to take us down to 'Ain Jidy and Sebbeh (Masada), and bring us home; he would not undertake to go farther with us, as even Masada was beyond the Resheidy's territory. It appears that the ground along the shore from 'Ain Jidy to Jebel Usdum is a sort of neutral ground, formerly claimed by the Jellahîn, but, since their decay, under no control whatever. This road has been the highway for predatory bands passing north and south since the time of Abraham, and was just now considered particularly unsafe for Franks, unless escorted by a strong guard.

Of course we had to go through a considerable amount of coquetting with the sheikh before he would come to terms; but owing to the good offices of Mr. Wood, the acting consul, the arrangements were completed within twelve hours.

We had in the meantime been getting ready our caravan; and as we were going into a country utterly barren, we had not only to carry with us the whole of the corn for the journey, but also huge goat-skins for water, and spare mules to carry them.'

We made the Frank Mountain our starting-point, where we found the tanks just running dry, and the water of the muddiest. Early next morning (Saturday, 6th July) we started, passing Tekoa, thence down Wady Hasâsa, and arrived at the top of the 'Ain Jidy pass about 4 p.m.

The view from this point was magnificent; the sky was clear; we were two thousand feet above the Dead Sea, and yet as it were hanging over it; the sea below us appeared of an intense blue, with yet a curious milky film over it, with here and there dark moving spots passing along, as if floating islands; the hills beyond were thrown by the setting sun into striking contrasts of light and shade, the rocks being of a rosy tint; below, on the narrow strip of the Ghor, a vivid green struck the eye, which one could almost conjure into the palm and other tropical trees we knew to be growing there. The hills themselves were not in one monotonous line, as seen from Jerusalem, but collected into masses of different heights, broken by deep and narrow gorges, above one of which Kerak was to be seen, the houses and battlements coming out most plainly in the glowing sunset. It is seldom that the atmosphere in summer is clear enough to allow of a view such as we saw that afternoon. We had to hurry on to get to our camp before dark; the road down is very bad, but not dangerous; it took us an hour to descend the fourteen hundred feet, and then we found ourselves on the little sloping spur, from the top of which 'Ain Jidy gushes, falling down by cascades into the sea some five hundred feet lower. We had felt the heat increasing gradually as we descended; and when we reached the 'Ain our thermometer (after sunset) stood at 95°

Fahr., and we were still a good height above the sea (500ft.), the hot air from its shores coming up constantly in most disagreeable and stifling puffs.

We found our guards bathing in the 'Ain; but we bundled them out and turned in ourselves, and had a most delightful bath, though the thermometer in the water stood at 81°.

We slept very little that night owing to the heat and noise. We had a guard of sixty men; we had only paid the sheikh for thirty, but we did not feel very comfortable in the country of the Jellahîn, and each man had his double. All night long, camel loads of salt (from Usdum) were winding up the narrow staircase above us, and our guards kept up an incessant noise, talking to the camel-drivers, with whom they conversed at a distance of several hundred yards. It is astonishing to what a distance the Arabs manage to pitch their voices when they wish it.

In the morning (Sunday) we were awoke by the first rays of the sun shining on our tent and raising the temperature to over 100°; we had to turn out quickly, swallow a hasty breakfast, and start off for shade, in the Wady Sudeir, in search of the grotto described in Tristram's "Land of Israel."

It was out of the frying-pan into the fire; for the spur on which we were encamped lies between Wadies Areyeh and Sudeir, and thus catches any stray puffs of fresh air that may happen to be straggling about; but Wady Sudeir is a regular sun-trap—a cleft with hills 200ft. in height at the mouth, and increasing towards the upper end. We soon became quite exhausted, struggling amid the tall bamboos; and we presented a ludicrous spectacle crouching down under the pieces of rock which gave a few inches of shade. Eventually somebody found an overhanging rock near the bed of the torrent, with bamboos making a lattice-work in front, and we here collected our forces, the Bedouins wanting to share the shade with us. It was a charming little retreat, only so very hot. When we had recovered, the church service was read, and somebody producing an "Ancient and Modern," we were enabled to sing a few hymns, the sound being mellowed by the rushing noise of the torrent hard by. An appropriate sermon on the Dead Sea fruit closed our proceedings. We dared not, however, leave our retreat until late in the afternoon, when we followed up the torrent, coming upon some beautiful cascades, one of them twenty feet high. After a little slippery climbing we arrived at the grotto of which Mr. Tristram speaks so enthusiastically. It is certainly a most beautiful spot (see photograph No. 282), but I fancy more water was flowing from it when we were there, as we were unable to get very near it without getting wet through; the sun was now low, and we clambered back to our tents.

The next day was employed photographing; it was very trying work; but Corporal Phillips took some capital negatives—two of the grotto and hill above, one looking up the hill, one of an acacia and of the apple of Sodom. The heat was extreme, and after sunset the thermometer stood at 110° on the shore of the Dead Sea.

9th July, 1867. After taking some angles with the theodolite, we left 'Ain Jidy at 6.40 a.m. for Sebbeh. At 8.50 a.m. we arrived at two fresh-

water springs near the seashore; here we filled our skins and jars, as we were told we should find no more drinkable water until we arrived at Wady Um Baghek, on the other side of Sebbeh.

The old fortress soon loomed in view, and we began to look out for shade among the curious flat-topped hillocks through which we were moving. We could find nothing aproaching to shelter until we had passed to the south-east of the foot of Sebbeh, where we found one solitary rock standing over the bed of a dried-up water channel; at the foot of this was a narrow strip hidden from the sun, and here we were able to breathe freely. We arrived at 11 a.m.; waiting for our mules to come up, we commenced our lunch, and had just drunk some wine when we found that the remainder of our water had been drunk up by the Bedouin. We sent a mounted man back to get some more, but it seemed long enough before it came.

Our guides were very much exhausted, and our sheikh said he could not go any farther; we wished to go on to Wady Um Mogkik for the night, as there is plenty of water there; but he declined to go so far, as he had only contracted to go to Sebbeh; however, we put it to him that if he did not acquiesce to our plan, we should hold him to his contract to the letter, and make him take us up to the very top of the fortress, baggage and all. At this he gave in, quietly remarking that the English always had their own way; but we found afterwards that he intended to have his way, for after we had sent a written message to the baggage party ordering them on to Wady Um Mogkik, he sent an express messenger to say we had changed our minds and wished to camp at the northern foot of Sebbeh. For this little piece of treachery we were, at the close of the day, very thankful.

We now made arrangements for photographing, and left Corporal Phillips down at the bottom while we ascended; we started at 2.20 p.m. —Dr. B., myself, three Bedouin, and a little flask of water. Our men had never been up before, and as we were on the wrong side we felt doubtful whether we should double the southern side of the fortress and so get into the regular path, or should go towards the north. Circumstances guided us: we found that full on the eastern side we had less difficulty, and we thought to creep round at a higher level; when, however, we were about half way up we saw right above us a sort of broken path, and we were so knocked up that the danger of the short cut appeared as nothing to the long pull round. We commenced scrambling up by a path more dangerous than difficult, for the natural lay of the rocks is such that they crop out perpendicular to the steep side of the hill, and thus each stone you scramble up is overhanging and ready to topple over and crush you, should your weight be sufficient to overbalance it. One of the Bedouin suddenly disappeared over a rock; suspecting him, I caught him before he had quite finished the flask of water with which he had been entrusted. On getting close to the top we were nearly stumped: before us were two upright pieces of wall, of about fifteen feet each in height, without any apparent path; we found some toe-holes in these, and climbed up. A false step here would have been destruction:

we arrived at the top at 5.20 p.m. and gave three cheers, re-echoed from below: we found we had landed full on the middle of the eastern side of the flat surface of the fortress.

Whether the path we went up by or came down by is the "Serpent" spoken of by Josephus appears to be a question which cannot be solved by reference to Whiston's translation; but it seems probable that it should refer to the more difficult path to the east, by which we ascended.

Josephus, B. J. vii. 8, § 3. "Now of the ways that lead to it (Masada), one is from the Lake Asphaltitis, towards the sun rising, and another on the west, where the ascent is easier; the one of these ways is called the *Serpent*, as resembling that animal in its narrowness, and its perpetual windings . . . . and he that would walk along it must first go on one leg and then on the other; there is also nothing but destruction, in case your foot slip; for on each side there is a vastly deep chasm, &c."

Dr. Lynch's party, in 1848, went up by the western path, and conjectured it was the "Serpent," from its windings; M. de Saulcy, in 1850, also went up by the western path, and calls it the "Serpent;" but the latter, in taking Dr. Lynch's party to task on the subject, falls into an error in saying that besides the road he took "there is no other approach from the Dead Sea to Masada" (see note to page 228, English translation of De Saulcy's journey in 1854).

Mr. Tristram, in 1864, in "The Land of Israel," page 306, considers the "Serpent" to be the eastern part, and says: "The traces of this we could easily make out at intervals, but the pathway itself is completely broken away; and it is probable that, for many ages, no unwinged creature has ever reached the fort from the east."

Whether the "Serpent" is proved to be the eastern or western path is a matter of little moment, as they both wind considerably; but it is of some importance that we should have found the eastern path, and have come up by it, and have so far helped in a small way to verify the description of the Jewish historian.

As it would have been impossible for the photographic apparatus to be brought up by the eastern path, we shouted out for the party below to come round, and then we began to examine the ruins.

These are well described by Lynch, De Saulcy, and Tristram, and we were not long enough there to do more than make a short examination; but quite long enough to find that the place has not been half looked over, and that a stay of two or three days in the winter time on the top of this rock will be necessary before it can be properly examined and described.

We found a large tank 91ft. long, 27ft. wide, and 60ft. high, with a flight of steps leading down to it: on the plaster was written, "Cistern visited by William Tipping and Rev. Samuel A'Court, 14th March, 1842."

Some of the walls of the buildings are most curiously pigeon-holed. Photograph No. 288 shows one of these walls. We attempted to go down to the round tower at the northern end, but I doubted the ability of the Bedouin

to let me down 60ft. in safety. They might not have intended any harm, but their practical jokes are rather rough, and a playful little slip of the rope of four or five feet or so at the bottom might have sent me flying down the cliff. They never appear to calculate the results of what they do. Irby and Mangles describe a joke played on one of them by a Bedouin on the east of the Jordan: a scorpion was put up the sleeve of one of their coats.

After some delay, Corporal Phillips appeared with his implements; he was looking rather the worse for the journey, having tried a short cut across the chasm, and got a roll down the hill of some 20ft. It was so near sunset that the view of the Lisan and the opposite hills would not develop, but some of the views of the walls, &c., were successful. A view was taken on either side of the pointed archway, on which are the mystic signs ♀ and △. I have seen ♀ on the flanks of the Jellahîn camels, and believe it to be a Bedouin mark for the district or tribe. In Spain there are marks peculiar to districts and families, and the horses are all branded with them, just as we mark our sheep; and the camels here appear also to be branded according to their tribes or owners. To show how easily the marks can be made on the pointed archway at Masada, I may mention that just before photographing, I found that another astronomical sign had been added: the artist, rather horrified to find that his handiwork was so soon to be put on record, hastily rubbed it out.

Our views were not completed by sunset, and as Corporal Phillips had got so knocked about coming up, he elected to stop at the top all night in preference to going down and up again in the morning. We promised to send him up some dinner, and started off by the western path. We had not gone down far before darkness came on, and we soon found ourselves in difficulties. Our guides hardly knew the way, and as we could not see before us, we expected each step to find ourselves treading the air, being somewhat impressed with the account Josephus gives of the chasms on either side of the road. Thankful we were when we met some men who had been sent up to find us with a light, but it was not pleasant to see that we had had some narrow shaves in the darkness. We were now very glad that our sheikh had placed the camp close to the foot of the fortress.

With regard to the height of Sebbeh above the Dead Sea, with two aneroids taken independently I made it fifteen hundred feet. Mr. Tristram makes it seven hundred feet higher. This discrepancy is very great; but though I don't think there was any error in my observations, I cannot vouch for their accuracy, as the extreme heat made it impossible to observe with great care. We sent some dinner up to Corporal Phillips, and some of the water we had left from the morning, which was very nasty. The men, however, did not carry the water up. There is a nice little fountain near the top of Sebbeh, on the western side of the hills, which they knew of, and of which they told us nothing until next morning, after we had suffered several hours' thirst, and had had to drink stinking water. Next morning we awoke, dull and unrefreshed. As we looked out on the early dawn, a quivering mist hung over every rock; a

heavy silence filled the air, and made us feel the utter desolation of the place; funny jagged flat tops of marly rocks jutted out in all directions, looking like castles slumbering under the enchanter's wand; not a sound from bird or beast could be heard.

The moment the sun rose all was changed: his rays lighted up and brought back life to the barren rocks, and we were in the world again.

Sending up Corporal Phillips his breakfast, we left him a horse and mule, and hurried on with the rest, for, poor beasts, they had had nothing nearly twenty-four hours, and were regularly parched up. Part of our way we noticed driftwood in a line thirty feet above the then level of the sea. Our road then lay through the water, as the rocky shore was too steep, and it was pitiful to see the animals sniffing up the salt, bitter brine. At 11.45 A.M. we arrived at Wady Um Moghik, and found a beautiful stream of water in a deep gorge, where we could hide away from the sun. We sat down to lunch, but were very anxious for our mules: they took so long to get along, and came straggling in, each looking more done up than his predecessor. Only one could not get up to the stream, and to it water was taken, and it revived.

After we had lunched we attacked our sheikh on the subject of paying a visit to Jebel Usdum. He refused decidedly, but to our surprise offered to go on and encamp for the night at Wady Zuweireh. This just suited us, and we said no more about it until we were ready to start. It appears that the sheikh was afraid to be caught in such a trap as Wady Um Baghik, and preferred to camp in Wady Zuweireh, because it was on the road to Hebron, and gave him some chance of beating a retreat if attacked.

When we were ready, we said we had made up our minds to go to Jebel Usdum, but that they need not come unless they wished, and we started. There was soon an uproar among them; one asked another how he could go back to face his family and say he had left the Franks to their fate, and started off after us; soon others came tailing in, and in a couple of hours we had a troop of some five-and-twenty volunteers at our heels.

It was rather pleasant to see that the Ta'âmireh had some code of gallantry left among them, for they have fallen very low of late years. It is very difficult for Franks to understand their ideas on etiquette. Sheikh Goblan told me that it was no disgrace for him to run away in battle, because he carried no ostrich feather on his spear. Like the pirate's flag, the ostrich feather is a sign of victory or death, and so the Bedouin who does not carry it can run away or fight it out, as he pleases.

As we passed the Wady Zuweireh mouth we noticed quite a change in our volunteers. They had before been slow to come on; but now they were regularly in for the game, they became cheerful and bright, delighted to have a chance of bearding the Jellahîn in their country. We passed on by the curious hill of salt, and examined "Lots Wife," a very large pillar of salt, something like a figure out of a Noah's Ark. At the eastern end we came on the mouth of a large cavern in the hill, through which a stream appears to flow in winter time; inside, the temperature felt quite cold after the heat outside, though it was hotter in there than the aver-

age temperature at Jerusalem in July. We now found it time to turn back, and immediately our men relaxed their strict silence, as if all danger was passed, and fired a *feu de joie,* shouting and jeering at their absent enemies. Had they known that a large party of Jellahîn were watching them from over the mountain sides they would not have been so confident, as at one time they had not a shot ready among them. It appears that Mr. Peter Bergheim was just returning from Petra (where he had been successfully photographing) and, suspecting that we were with the Ta'âmireh, succeeded in restraining his party from coming to close quarters with us.

The rock of Jebel Usdum is partially formed of enormous masses of salt, presenting a series of pinnacles and sharp angles formed by the sun and moisture in winter. On our road we met with most beautiful specimens of salt crystals, like icicles, only pointing towards the sky: we collected some of these, but they melted away at Jerusalem. As we were moving campwards, and were talking of "Lot's Wife," the attention of all three was suddenly attracted. We saw before us among the pinnacles of salt, a gigantic "Lot," with a daughter on each arm, hurrying off in a south-westerly direction, their bodies bent forward as though they were in great haste, and their flowing garments trailing behind. We did not get to our camp until some two hours after sunset.

Next morning we started for Hebron over a long and uninteresting road; the men did not know the country, and appeared ill at ease. One of the muleteers had a violent attack of fever and could hardly stick on his donkey. We had been a day longer than was expected, and the mules had had no corn that morning.

Soon four horsemen appeared over the brow of a hill and then retired. Our Bedouin became alarmed, got the baggage together in a clump, and consulted what they should do. The scouts said there was a strong party of Bedouins dodging us to our left. Our men now began to get excited, pulled off their tarbushes and abbas and flung them to the muleteers, and looked very wild, nearly naked, with the long tufts from their heads floating in the air. One man would strike his breast and say, "Who says I'm afraid?" and then another would take it up. Eventually a great black negro nearly caused a fight among ourselves, as one of his comrades said he looked afraid, and the rest took sides. For several miles we went on parallel to the line of Arabs on our left, but gradually we lost sight of them. They appear to have been the party of Jellahîn bound for Hebron, but not wishing to come in contact with us.

Towards evening we came to a well. There was only one bucket for drawing water, and a regular struggle took place. We had to fight our way among the savages before we could get to drink. It was now a question of what we should do, whether to stay by the water without food or push on to Hebron without water. We chose the latter, and succeeded in getting to Kurmel, a short distance south of Hebron, by ten o'clock. Here we were lucky enough to find some straw lying about, and our mules had a feed on it. Next morning we rode in to Jerusalem.

C. W.

LIST OF SUBSCRIPTIONS.

SEPT. 22ND TO DEC. 24TH, 1869.

a denotes Annual Subscriber.

*** If any omission or mistake be observed in the following lists, the Secretary will be very glad to be informed of it, and will rectify the error in the next *Quarterly Statement*.

	£	s.	d.
Major-General Rainer	5	0	0
*a*Rev. John Bliss	1	0	0
Proceeds of Lecture at Brisbane, by Mr. G. Yoole	3	9	7
*a*J. E. Bailey, Esq.	0	10	6
*a*Robert Salmon, Esq.	0	10	6
*a*V. J. G.	1	1	0
*a*J. H. Wagstaffe, Esq.	1	1	0
Proceeds of Lectures by Rev. G. Chester	6	5	0
W. Farnes, Esq.	0	10	0
*a*Lieut. Warren	2	0	0
Rev. Noble Jackson	1	0	0
Rev. L. O. Brastow	1	0	0
Per C. Burbidge Hambly, Esq.	1	6	0
*a*H. J. Ker Porter, Esq.	1	1	0
*a*W. Pearson, Esq.	1	0	0
*a*Rev. J. W. Bardsley	0	10	0
The Andover Theological Seminary, Massachusetts, U.S.A.	1	1	0
Anon., per Rev. G. St. Clair	0	2	6
"A Lady," per E. Adamson, Esq., M.D. (2nd Don.)	1	1	0
Miss C. Leycester	5	0	0
M. de Saulcy (£12 *a*)	6	0	0
Mrs. Sinkler (Collecting Card)	0	6	0
W. F.	0	10	0
W. Ward, Esq.	5	5	0
*a*Mrs. Cheetham	1	1	0
W. Henty, Esq.	1	1	0
Hon. Otway Toler	1	0	0
*a*J. Kirkpatrick, Esq.	1	1	0
Miss Lawrence (collected by)	0	8	6
*a*Major Brooke	1	1	0
*a*F. H. Peters	1	1	0
Miss Robarts	0	5	0
Per Rev. Greville Chester—			
The Ven. Archdeacon Bickersteth	5	0	0
Rev. R. Pigott	1	1	0
Rev. A. Isham	0	10	0
J. P. Martin, Esq.	1	0	0
Rev. Edward Swann	1	1	0
*a*Rev. Dr. Zimmerman	0	10	0
*a*Claude W. Wyatt, Esq.	1	1	0
G. R. Crotch, Esq.	5	0	0
Captain Moody	1	1	0
Per the Dean of Chester—(Proceeds of Sermon before the Church Congress)	13	4	0
Rev. C Grey (2nd Don.)	0	10	0
*a*Ven. Archdeacon Marryat	1	1	0
Rev. T. Emens	1	0	0
T. Corbett, Esq.	3	3	0
Rowland Smith, Esq., M.P.	5	0	0
Herr Blass	1	0	0
Rev. J. Le Mersurier (10s. *a*)	1	0	0
*a*Hon. Miss Copley	1	0	0
Rev. P. D. Latouche	1	0	0
*a*C. Goodban, Esq.	0	10	0
Miss Harris	1	0	0
*a*Miss Emma Ward	0	5	0
R. Benson, Esq.	5	0	0
— Peckover, Esq.	5	0	0
Rev. M. S. Wall	5	0	0
H. S. B. (per the Archbishop of York)	7	10	0
Mrs. Crosskey	0	2	6
*a*Eugene Stock, Esq.	0	10	0
C. Bond, Esq.	1	1	0
Per Miss Leach	1	2	6
*a*W. B. Young, Esq.	1	0	0
*a*Rev. A. Clarke Smith	0	2	6
*a*Arthur Jones, Esq.	5	0	0
*a*Rev. J. G. Smyth	2	2	0
Dr. Caleb Williams	1	0	0
G. Hardacre, Esq.	3	0	0
Rev. John Bird	1	1	0
Rev. G. H. Egerton	1	1	0
*a*Rev. C. H. Hole	1	1	0
Rev. C. Chamberlain	0	10	0
Rev. H. S. Rhodes (2nd Don.)	2	2	0
C. W. Roberts, Esq.	1	1	0
P. F.	1	0	0
Miss Gould	2	2	0
*a*Hon. & Rev. A. Legge	1	1	0
J. Macandrew, Esq. (2nd Don.)	2	10	0
Henry Pawle, Esq.	5	0	0
Miss Mayow (3rd Don.)	1	0	0
W. S. Brown, Esq.	4	0	0
Rev. W. Marsh	1	0	0
Rev. H. Geary	2	2	0
*a*Ernest Wood, Esq.	2	2	0

	£	s.	d.
Rudolph Hankey, Esq.	5	5	0
Per Rev. F. W. Holland	25	0	0
*a*Rev. C. T. Arnold	1	1	0
*a*Rev. G. H. Rouse	0	5	0
*a*Rev. Dr. Courtenay	1	1	0
Per Edwin Ransom, Esq.	5	19	0
*a*James Dimmock, Esq.	10	0	0
*a*Rev. Stenton Eardley	1	1	0
*a*H. Smith, Esq.	1	1	0
*a*Rev. J. A. Bastow	0	10	6
*a*James Barlow, Esq.	1	1	0
*a*Nicholas Whitley, Esq.	1	1	0
*a*The Dean of St. Paul's	1	1	0
Sir Arthur Elton	2	2	0
S. Cotton, Esq.	1	1	0
*a*G. Octavius Wray, Esq.	1	1	0
Per Do. (*a*) W. C. Booth, Esq.	1	1	0
Do. Do. Proceeds of Lecture at Aysgarth	2	14	5
S. S.	0	10	0
*a*G. B. Acworth, Esq.	5	5	0
*a*John Benham, Esq.	1	1	0
Hon. Otway Toler, 2nd Don.	1	0	0
*a*Rev. H. T. Ellacombe	1	1	0
Mrs. C. J. Brook	0	10	0
Per Do., "A Willing Pickaxe"	5	0	0
Miss Brook	0	10	0
*a*F. F. Tuckett, Esq.	2	2	0
Rev. J. Holding	1	0	0
F. H.	1	0	0
*a*The Archdeacon of Leighlin	1	0	0
*a*Major Speid	2	0	0
*a*Rev. Prof. Plumptre	2	2	0
*a*Rev. F. T. Wethered	2	2	0
*a*Rev. J. M. R. Barnard	0	10	6
*a*Rev. R. Wedgewood	1	1	0
Miss Porter	1	0	0
Mrs. Prance	0	10	0
Per Miss Howden	1	10	0
*a*E. P. Loftus Brock, Esq.	1	1	0
The Bishop of Chester	10	0	0
Rev. J. D. Lockwood	1	0	0
E. H.	1	0	0
Miss Lush	0	10	6
*a*Rev. D. James	0	10	0
*a*W. R. M. Glasier, Esq.	1	1	0
Rev. C. J. Tayler	0	10	0
S. Morley, Esq., M.P.	100	0	0
S. S.	0	10	0
Per Mrs. Wilson	1	1	0
*a*Rev. G. Dobree	0	10	6
*a*N. Acton, Esq.	0	2	6
W. Leaf, Esq.	100	0	0
Captain Walter	2	2	0
The Masters of Uppingham School	3	5	0
Uppingham School	15	0	0
*a*Rev. S. J. Phillips,	1	1	0
J. H. Parker, Esq.	10	10	0
*a*Rev. E. B. Ainger	1	0	0
Hon. F. B. Ponsonby	5	5	0
Rev. E. Hill	1	1	0
R. B. Martin, Esq.	1	1	0
*a*F. Smith, Esq.	1	0	0
Rev. John Allen	5	0	0
S. H. Officer, Esq. (2nd Don.)	5	0	0
Rev. W. Inge, for 1869 and 1870	2	2	0
*a*Mrs. Thomas	1	1	0
*a*G. Bennett, Esq.	1	1	0
*a*Mrs. Huish	1	1	0
Rev. W. Pound	2	0	0
Miss L. Barton	1	1	0
— Cowen, Esq.	1	1	0
The Whitechapel Church of England Young Men's Association	5	5	0
Per Colonel Hebbert, R. Trotter, Esq.	0	10	0
*a*Rev. F. Gerald Vesey	1	1	0
Per Mrs. E. Hill	0	5	0
*a*J. R. Wigham, Esq.	1	0	0
*a*Rev. N. R. Devereux	1	1	0
Proceeds of Lecture by Rev. H. Simon	1	10	0
Per W. G. Bevan, Esq.	0	15	6
*a*F. Hayter Lewis, Esq.	1	1	0
*a*Mrs. Lloyd	1	1	0
*a*Rev. E. J. Hornby	1	1	0
*a*Rev. W. R. Thorburn	1	1	0
*a*J. Clarkson Hay, Esq.	1	1	0
*a*D. Smith, Esq.	1	1	0
*a*S. Jackson, Esq.	1	1	0
*a*Captain Miller	1	1	0
*a*R. Butcher, Esq.	0	10	0
*a*Rev. J. Webb	0	10	6
*a*Rev. H. Dowson	0	10	6
Robinson Kay, Esq.	5	0	0
G. Hedley, Esq.	1	1	0
*a*Dr. J. Kitching	0	5	0
Lodge of Sincerity, No. 292	1	1	0
*a*Mrs. Henry Christian	1	1	0
*a*Rev. G. S. Rowe	1	1	0
*a*A. M. Coleman, Esq.	0	10	0
*a*John Oldham, Esq.	0	10	0
*a*E. J. Upton, Esq.	0	10	0
*a*H. Hawkins, Esq.	0	10	0
*a*E. T. Holden, Esq.	2	2	0
*a*Arthur Lupton, Esq.	1	1	0
*a*W. H. Kinder, Esq.	1	1	0
*a*R. W. Hamilton, Esq.	1	1	0
*a*E. Butler, Esq.	0	10	6
*a*F. Lupton, Esq.	0	10	6
*a*M. Swan, Esq.	0	5	0
*a*John Strahan, Esq.	0	10	6
*a*J. C. Sharp, Esq.	1	1	0
*a*Rev. G. Wallace	1	1	0
*a*H. Y. Richardson, Esq.	1	1	0

	£	s.	d.
*a*Mrs. H. Y. Richardson	1	1	0
Mrs. P. Leckie	1	1	0
*a*Rev. W. March	0	2	6
*a*John Potts, Esq.	1	1	0
Rev. S. B. Sedly	1	1	0
*a*Joshua Brough, Esq.	1	1	0
*a*Miss Annie Fenton	0	5	0
*a*Mrs. Howard	0	5	0
*a*Y. Smith, Esq.	0	2	6
Mr. Hallowes	0	2	0
*a*J. Goddard, Esq.	1	1	0
*a*Rev. P. Harley	0	5	0
*a*Miss R. Brown	1	1	0
*a*G. Marley, Esq.	0	5	0
E. Armitage, Esq.	1	0	0
— Parkinson, Esq.	0	1	6
*a*Rev. Dr. Collis	1	1	0
Dr. Kingsley	0	10	0
*a*W. M. Newton, Esq.	1	1	0
*a*Rev. W. Griffith	1	1	0
*a*Edward Johnson, Esq.	0	10	6
*a*R. Bennett, Esq., M.D.	1	1	0
"Island of Arran"	0	2	0
*a*Rev. E. H. Birley	1	1	0
J. Colan, Esq.	1	0	0
*a*H. S. B. Wodehouse, Esq.	0	10	6
Per do.	2	2	1
*a*Miss Moore	1	0	0
W. H. P. Carew, Esq.	5	0	0
*a*C. A. Cornish Browne, Esq.	2	2	0
Per Mrs. J. Gore Tipping	2	7	2
Per Miss Hudson	1	10	0
*a*Spencer H. Curtis, Esq.	1	1	0
*a*Rev. J. Blackburn	1	1	0
Per W. H. Baker	0	6	0
The North York Lodge, No. 602	1	1	0
Lafayette Royal Arch Chapter, Washington, U.S.A.	1	0	0
Prov. Gr. Lodge of Northumberland	10	10	0
Lodge 526, Wolverhampton	2	2	0
Grand Lodge of Canada	10	2	7
By Sale of Publications	35	6	5
By Sale of Photographs—Lectures	19	0	3
Up to Dec. 22	10	12	6

LOCAL ASSOCIATIONS.

ASHFORD.

Hon. Sec.—F. A. Dewé, Esq.

	£	s.	d.
Per Lecture by the Rev. H. Geary, Nov. 1.—			
Collection at doors	4	15	9
Sale of Publications	0	6	0
Subscriptions—			
*a*J. Cudworth, Esq.	1	1	0

BATH.

Hon. Sec.—Rev. T. P. Methuen.

	£	s.	d.
Rev. H. H. Methuen	1	0	0

BIRMINGHAM.

Hon. Sec.—Rev. Charles Evans.

	£	s.	d.
Per Lecture by the Rev. G. St. Clair, Oct. 12—			
Admission at doors	2	13	9
Sale of Publications	0	5	0
Subscriptions—			
*a*W. Jeff, Esq.	1	1	0
*a*J. A. Cooper, Esq.	0	5	0
*a*Birmingham Sunday School Union, per H. Hindmarsh, Esq.	1	1	0
Per Lecture at Erdington, Birmingham, by Rev. G. St. Clair, Oct. 22—			
Collection at doors	1	9	2
Sale of Publications	0	2	0
Sale of Photographs	0	3	0
Per C. R. Cope, Esq.—			
Miss Vanwart	0	10	0
F. Osler, Esq.	1	1	0
Dr. G. E. Evans	1	1	0
A. Ryland, Esq.	0	10	0
Rev. C. Evans	1	1	0
W. Middlemore, Esq.	2	2	0
Col. Ratcliff	2	2	0
Rev. W. R. Cope	0	10	0
*a*W. Back, Esq.	1	1	0
*a*C. R. Cope, Esq.	1	1	0
Mrs. Avery	1	1	0
Rev. T. W. Freer	1	1	0
Miss Phipson	1	1	0
W. Mathews, Esq., jun.	1	1	0
W. Evans, Esq.	1	1	0
Rev. George Lea	1	1	0
*a*John Jaffray, Esq.	1	1	0
Rev. R. Ferguson	0	5	0
Rev. T. G. Simcox	0	5	0
Miss Cope	1	1	0
A Friend	0	5	0
Miss H. P. Cope	0	2	6
Alfred S. Evans, Esq.	1	1	0
W. Sharp, Esq.	1	1	0
Edward Gem, Esq.	1	0	0
Mr. A. Peyton	1	1	0
Rev. E. McCarthy	1	1	0
Mr. J. T. Collins	1	1	0
A Friend, per do.	0	10	0
J. Unatt, Esq.	1	1	0

BRIGHTON.

Hon. Sec.—Rev. D. Winham.

	£	s.	d.
Per Lecture by Rev. H. Geary, Nov. 10—			
Collection at doors	24	4	2
Sale of Publications	0	17	0

	£	s.	d.
Donations and Subscriptions—			
*a*The Very Rev. the Dean of Chichester	1	0	0
*a*Rev. W. Stephens	0	10	6
*a*Dr. Griffith	1	1	0
*a*Rev. J. Sumners	0	10	6
Bradford.			
Proceeds of Meeting, by Rev. J. W. Bardsley and W. Morrison, Esq., M.P., Nov. 30.	10	0	0
Proceeds of Lecture, by Rev. G. St. Clair, on Oct. 8—			
Collection at doors	8	1	9
Sale of Photographs	0	9	0
Proceeds of Lecture by Rev. G. St. Clair, on Nov. 11—			
Collection at doors	6	4	5
Sale of Photographs	0	11	6
Sale of Publications	0	8	10
Subscriptions—			
G. Tindle, Esq.	1	1	0
Alderman H. Brown	1	1	0
Cambridge.			
Hon. Sec.—Rev. T. G. Bonney.			
Per Lecture by the Rev. H. Geary, Dec. 2—			
Collection at doors	4	3	0½
Sale of Publications	0	9	0
Subscription—			
Rev. E. Hill	1	1	0
Chicago, U.S.A.			
Hon. Sec.—Rev. Dr. Patton.			
H. B. Bogue, Esq. 10 dols. ... Rev. W. Patton, D.D. 10 dols.	3	6	1
Clapham.			
Per Lecture by Rev. H. Geary, Dec. 14—			
Collection at doors	7	4	5
Sale of Publications	0	3	0
Donations—			
Anonymous	5	0	0
Chester.			
Hon Sec.—Very Rev. Dean of Chester.			
Proceeds of Lecture by Rev. G. St. Clair, Sept. 16—			
Collection at doors	2	2	2½
Sale of Publications	0	6	0
Subscriptions—			
Miss Alletson	0	5	0
Mr. E. Thomas	0	2	6
Cheltenham.			
Per Dr. E. Wilson, *Hon. Sec.*	60	0	0
Including the following list of paid and promised donations and subscriptions—			
*a*The Rt. Hon. the Earl Ducie	5	0	0
*a*Rev. S. Chamberlayne	1	1	0
*a*E. Holland, Esq.	1	0	0
*a*R. C. Rogers, Esq.	1	1	0
*a*Rev. T. W. Jex Blake (for five years)	1	1	0
*a*Rev. Dr. E. Walker	1	1	0
*a*Rev. W. Gedge	1	1	0
*a*J. Walker, Esq. (for five years)	1	0	0
*a*Miss Nevins	0	10	6
*a*Miss Commeline	0	5	0
St. Augustine's Encampment, per Rev. C. Mostyn	1	1	0
Miss L. Helps, per Rev. T. Emmens	0	10	0
A. Z., per G. Grove, Esq.	5	0	0
*a*John Middleton, Esq.	1	1	0
*a*Rev. T. F. Fenn	1	1	0
*a*Rev. T. A. Southwood	1	1	0
*a*Dr. Rumsay	0	10	0
*a*Dr. Thorpe	5	0	0
Mrs. Thorp	5	0	0
*a*Baron de Ferrieres	1	0	0
*a*Sir Alexander Ramsay, Bart.	1	0	0
*a*Clarence Dobell, Esq.	1	1	0
*a*Miss Lander	0	10	0
*a*G. Harvey, Esq.	0	5	0
*a*General Polwhele	0	10	0
*a*Rev. T. H. Cardew	1	0	0
A. Yeames, Esq.	2	0	0
Miss Yeames	0	10	0
*a*Rev. H. G. Hopkins	1	1	0
*a*Mrs. Edward Potter	1	1	0
*a*A. Gardner, Esq.	1	1	0
Already acknowledged in No. III.—			
*a*Dr. Wilson	1	1	0
*a*H. Middleton, Esq.	1	1	0
J. Humphrey, Esq. (per)	1	16	6
A Lady	2	0	0
Devonport.			
Hon. Secs.—Rev. H. Everett and J. Venning, Esq.			
Proceeds of Lecture by Rev. F. H. Scrivener, Oct. 25, and Subscriptions	11	15	0

	£	s.	d.
DORCHESTER.			
Proceeds of Lecture by Rev. F. H. Scrivener, Dec. 3.....	6	12	4
DURHAM.			
Hon. Sec.—Rev. J. Dodd.			
Proceeds of Lecture by Rev. J. W. Bardsley, Nov. 26	10	0	0
DORKING.			
Per Proceeds of Lecture by Rev. H. Geary, Oct. 25—			
Collection at doors	5	19	1
Sale of Publications	0	11	0
Donations and Subscriptions—			
W. J. Evelyn, Esq.....	2	0	0
G. Cubitt, Esq., M.P.	10	0	0
Capt. Lang, R.N.	0	10	0
D. Matheson, Esq.	1	1	0
John Hart, Esq.	0	10	0
EASTBOURNE.			
Hon. Sec.—Rev. H. B. Whelpton.			
Proceeds of Lecture by Rev. H. Geary, Nov. 9—			
Collection at doors	8	6	0
ESHER.			
Proceeds of Lecture by Rev. H. Geary, Dec. 17—			
Collection at doors	7	10	0
Sale of Publications.....	0	8	6
Subscription—			
*a*Miss Moore.....	1	0	0
FAVERSHAM.			
Proceeds of Lecture by Rev. H. Geary, Oct. 18—			
Collection at doors	5	9	0
Donations and Subscriptions—			
*a*Miss Rigden	1	1	0
*a*C. Smith, Esq.	0	10	6
FARNHAM.			
Hon. Sec.—Rev. E. Utterton.			
Proceeds of Lecture by Rev. Henry Geary, Oct. 28—			
Collection at doors	6	14	4½
Sale of Publications.....	0	3	0
Donations—			
H. Olivier, Esq.	0	10	0

	£	s.	d.
FOLKESTONE.			
Hon. Sec.—Rev. J. W. Watson.			
Proceeds of Lecture by Rev. H. Geary, Nov. 27—			
Collection at doors	4	17	0
Donations—			
Rev. C. J. Taylor	0	10	0
Proceeds of Lecture by Rev. G. St. Clair, Sept. 8—			
Collection at doors	4	17	2
Sale of Publications	0	4	4
Sale of Photographs	0	1	6
Subscriptions—			
*a*Mrs. Robertson	0	3	0
*a*Mr. J. Clark.....	0	5	0
*a*Mrs. J. Clark	0	2	6
GUILDFORD.			
Hon. Sec.—Col. Thurburn.			
Proceeds of Lecture by Rev. H. Geary, Oct. 29—			
Collection at doors	5	2	0½
Sale of Publications.....	0	1	0
Subscriptions—			
*a*R. Taunton, Esq.	0	10	0
*a*A. Day, Esq.	0	10	0
*a*Col. Thurburn	0	10	0
HERTFORD.			
Hon. Sec.—Rev. T. Lingley.			
W. D. Pritchett, Esq., for 1869—1870 (10s. 6d. *a*).....	1	1	0
HAVANT.			
Proceeds of Lecture by Rev. H. Geary, Dec. 9—			
Collection at doors	4	0	9
Subscriptions—			
*a*Rev. J. Barton	0	10	0
*a*Mrs. Mountain	0	10	0
JEDBURGH.			
Hon. Sec.—G. Fyfe, Esq.			
Proceeds of Lecture by Rev. J. King, Nov. 9—			
Collection at doors	6	4	6
Donations and Subscriptions...	0	7	6
KETTERING.			
Hon. Sec.—Rev. H. Jackson.			
Proceeds of Lecture by Rev. J. King, Nov. 25—			
Collection at doors	6	2	1

	£	s.	d.
Subscriptions—			
*a*Rev. H. Lindsay	1	1	0
*a*Rev. H. Stobard	1	1	0

LEEDS.

Hon. Sec.—Ed. Atkinson, Esq.

Proceeds of Lecture by Rev. G. St. Clair, Nov. 23—			
Collection at doors	3	4	3½
Sale of Publications	0	6	3
Subscriptions—			
*a*J. B. Belborough, Esq.		10	6
*a*Miss S. Holdsworth		1	0

LIVERPOOL.

Hon. Sec.—Rev. C. D. Ginsburg.

Proceeds of Lecture by Rev. G. St. Clair, Sept. 21—			
Collection at doors	6	6	1
Sale of Photographs	0	4	6
Sale of Publications	0	8	1
Proceeds of Lecture at Everton, Liverpool, by Rev. G. St. Clair, Oct. 27—			
Collection at doors	6	15	9
Sale of Photographs	1	0	0
Sale of Publications	0	3	0
Subscription—			
*a*Rev. F. H. Robarts	0	10	0
Proceeds of Lecture at Crescent Chapel, Liverpool, by Rev. G. St. Clair, Oct. 28—			
Collection at doors	4	0	0
Sale of Photographs	0	1	6
Sale of Publications	0	4	0
Subscriptions—			
*a*J. H. Simpson, Esq.	1	1	0
*a*Alfred Hardwick, Esq.	1	1	0
Proceeds of Lecture at Fairfield, near Liverpool, by Rev. G. St. Clair, Nov. 3—			
Collection at doors	5	6	11
Sale of Photographs	0	6	0
Subscriptions—			
*a*E. Habershaw, Esq.	1	1	0
*a*R. G. Allan, Esq.	1	1	0
*a*Mrs. Graham	1	1	0
*a*R. Crooks, Esq.	1	1	0
*a*Miss Williams	1	1	0
*a*Messrs. Philip, Son, and Nephew	1	1	0
*a*J. Reid, Esq.	1	1	0
Proceeds of Lecture at Myrtle Street Chapel, Liverpool, by Rev. G. St. Clair, Nov. 5—			
Collection at doors	2	16	7
Sale of Publications	0	3	1
Subscriptions—			
*a*W. S. Caine, Esq.	1	1	0
*a*J. Bagshaw, Esq.	1	1	0
Proceeds of Lecture at Great George Street Chapel, Liverpool, by the Rev. G. St. Clair, Nov. 24—			
Collection at doors	5	9	0
Sale of Publications	0	4	8
Subscription—			
W. Crossfield, Esq.	1	1	0
Per Mrs. Marquis—			
Mrs. Allan	1	0	0
Mrs. Balfour	1	0	0
Mrs. Marquis	0	15	0
"A Friend"	0	10	0
Do.	0	10	0
Mrs. McEwen	0	10	0
Mrs. Macandrews	0	5	0
Mrs. Wallace Evans	0	5	0
Mrs. Graham	0	5	0
Mrs. J. Marquis	0	5	0
Mrs. R. Marquis	0	5	0
Mrs. H. Marquis	0	5	0
Mrs. Pattinson	0	2	6
"M.A."	0	2	6

LEWES.

Hon. Sec.—Rev. R. Straffen.

Proceeds of Lecture by Rev. H. Geary, Dec. 10—			
Collection at doors	6	6	8½
Donations and Subscriptions—			
*a*Rev. T. W. Wear	1	1	0
*a*Rev. F. Duke	0	10	0
J. Hodgkin	1	0	0

MANCHESTER.

Hon. Sec.—Rev. W. Crane.

Per Proceeds of Lecture at Cheetham, Manchester, by Rev. J. W. Bardsley, Nov. 22	5	0	0
Per Proceeds of Lecture at Rochdale, near Manchester, by Rev. G. St. Clair, Sept. 28—			
Collection at doors	9	9	8½
Sale of Photographs	0	17	6
Sale of Publications	0	7	3
Subscriptions and Donations—			
*a*J. Petrie, Esq.	1	1	0
*a*O. Ormerod, Esq.	1	1	0
G. T. Kemp, Esq.	5	0	0
H. Kelsall, Esq.	1	0	0

	£	s.	d.
Per Proceeds of Lecture by Rev. G. St. Clair, Sept. 22—			
Collection at doors	3	6	0
Sale of Photographs	1	8	6
Sale of Publications	7	5	0
Per Proceeds of Lecture at Cheetham Hill, Manchester, by Rev. G. St. Clair, Sept. 22—			
Collection at doors	3	10	6
Sale of Photographs	0	10	6
Sale of Publications	0	3	10
Per Proceeds of Lecture at Oxford Road Union Chapel, Manchester, by Rev. G St. Clair, Nov. 3—			
Collection at doors	7	2	11
Sale of Photographs	0	1	6
Sale of Publications	0	8	10
Subscriptions—			
J. Robertson, Esq.	1	1	0
J. Consterdine, Esq.	1	1	0
MANSFIELD.			
Per Proceeds of Lecture by Rev. J. King, Oct. 29—			
Collection at doors	15	8	9
Donations and Subscriptions...	3	3	0
*a*Rev. A. W. Worthington	0	10	6
MARGATE.			
Hon. Sec.—Rev. G. Collis.			
Per Proceeds of Lecture by Rev. H. Geary, Nov. 16—			
Collection at doors	2	2	8
Donations and Subscriptions—			
*a*F. W. Hitchen Kempe, Esq.	1	1	0
*a*W. F. Hunter, Esq.	0	10	6
— Town, Esq.	1	1	0
Per Proceeds of Lecture by Rev. G. St. Clair, Sept. 6—			
Collection at doors	2	0	1
Sale of Photographs	0	12	0
Sale of Publications	0	2	8
Donations and Subscriptions—			
*a*Rev. Gerrard Lewis	1	1	0
*a*Colonel Morrison, R.E.	1	1	0
*a*Mr. G. Adams	0	10	0
Mr. Littlejohn	0	8	6
MAIDSTONE.			
Per Proceeds of Lecture by Rev. H. Geary, Oct. 11—			
Collection at doors	7	5	1
Subscriptions—			
*a*Rev. T. W. Carr	1	1	0
*a*T. Grant, Esq.	1	1	0

	£	s.	d.
Per Proceeds of Lecture by Rev. G. St. Clair—			
Collection at doors	3	18	2½
Sale of Photographs	0	2	9
Sale of Publications	0	1	6
NORTHAMPTON.			
Collection at a Lecture	2	15	7
Sir H. Dryden	1	11	6
*a*Rev. Sydney Gedge	0	5	0
*a*F. Scriven, Esq.	0	10	0
*a*Mr. Williams, jun.	2	2	0
*a*T. Osborn, Esq.	1	0	0
*a*E. F. Law, Esq.	0	10	0
*a*J. B. Norman, Esq.	0	5	0
*a*J. Thompson, Esq.	0	10	0
NOTTINGHAM.			
Hon. Sec.—Rev. F. Morse.			
Per Proceeds of Lecture by Rev. G. St. Clair, Nov. 9—			
Collection at doors	6	10	3¼
Sale of Publications	0	9	1
Donations and Subscriptions—			
*a*A. J. Mundella, Esq., M.P.	1	1	0
*a*Captain F. B. Baker	1	1	0
W. McCraith, Esq.	1	0	0
NEWCASTLE-ON-TYNE.			
Per Proceeds of Lecture by Rev. G. St. Clair, Nov. 15—			
Collection at doors	6	6	11
Sale of Publications	0	3	10
Subscription—			
*a*R. Walters, Esq.	2	0	0
Per Proceeds of Lecture by Rev. G. St. Clair, Nov. 16—			
Collection at doors	4	8	5½
Sale of Publications	0	7	7
Subscription—			
*a*Rev. T. Harwood Tattison	0	10	6
OXFORD.			
Per Proceeds of Lecture by Rev. G. St. Clair, Nov. 3—			
Collection at doors	5	18	4
Sale of Photographs	0	10	6
Sale of Publications	0	3	8
OLNEY AND NEWPORT PAGNELL.			
Per Proceeds of Lecture at Olney by Rev. J. King, Nov. 30—			
Collection at doors	2	0	9
Admission	1	19	3

	£	s.	d.
Donations and Subscriptions...	2	0	0
Per Proceeds of Lecture at Newport Pagnell, by Rev. J. King, Nov. 29—			
Collection at doors	3	10	0
Subscription.....	1	0	0

PORTSMOUTH.

Hon. Sec.—Rev. N. R. Devereux.

Per Proceeds of Lecture by Rev. H. Geary, Dec. 8—			
Collection at doors	4	14	5½
Sale of Publications	0	5	0
Donations and Subscriptions—			
J. Griffin, Esq.....	1	1	0
*a*Rev. J. S. Blake.....	1	1	0
*a*Mrs. Brownrigg	1	1	0
*a*Rev. N. R. Devereux.....	1	1	0

RYDE.

Hon. Sec.—Rev. J. Le Mesurier.

Per Proceeds of Lecture by Rev. H. Geary, Dec. 7—			
Collection at doors	7	17	2
Sale of Publications.....	0	15	0
Donation—			
Rev. W. Pound	2	0	0
Per Proceeds of Lecture by Rev. G. St. Clair, Sept. 14—			
Collection at doors	3	4	4½
Sale of Photographs	0	4	6
Sale of Publications	0	6	8
Subscriptions—			
*a*Miss Griffith.....	0	10	0
*a*Miss Bovill	1	1	0
H. Pawle, Esq.	5	0	0
*a*Lady Harriet Fowler	1	1	0

REIGATE AND RED HILL.

Hon. Sec.—W. Wilson Saunders, Esq.

Per Proceeds of Lecture at Reigate by Rev. H. Geary, Nov. 15—			
Admission at doors	3	15	0
Per Proceeds of Lecture at Red Hill by Rev. H. Geary, Nov. 17—			
Collection at doors.....	4	6	4
W. Wilson Saunders, Esq.....	5	5	0
Rev. Cecil Wynter	2	2	0
W. S. Brown, Esq.....	21	0	0

RAMSGATE.

Hon. Sec.—Mr. Wilson.

Per Proceeds of Lecture by Rev. H. Geary, Nov. 2—			
Collection at doors.....	9	17	8½
Sale of Publications	0	11	0
Per Proceeds of Lecture by Rev. G. St. Clair, Sept. 7—			
Collection at doors	3	12	9½
Sale of Photographs	1	1	0
Sale of Publications	0	3	10
Subscription—			
Mrs. Stewart	2	2	0

RICHMOND.

Collection at Lecture by Rev. G. Williams..	8	12	4
Ditto at Naval College, Isleworth, per Mrs. Clifton, by Rev. G. Williams	1	15	9
Mrs. C. Ward.....	1	1	0
The Earl of Onslow.....	10	0	0
W. J. Maxwell, Esq.	1	1	0
Rev. H. W. Hales	2	2	0
*a*J. C. Sharpe, Esq.	1	1	0
Rev. F. N. Oxenham.....	2	0	0
Mrs. Forbes	1	0	0
Mrs. Cook.....	1	0	0
Dowager Lady Harberton	0	10	0
*a*W. Anderson, Esq., M.D.....	1	1	0
*a*W. S. Graham, Esq.	1	0	0
R. Alexander Smith, Esq.....	1	1	0
H. G. Ashurst, Esq.	1	1	0
Mrs. Housman.....	0	10	0
Miss Wade	0	10	0
T. V. Stock, Esq.	0	10	6
Miss Cox	0	10	0
F. Chapman, Esq.	1	1	0
Douglas Dent, Esq.....	1	0	0
Rev. C. T. Procter	1	0	0
A. Walton, Esq.....	0	10	0
*a*Rev. W. Hiley	1	1	0
*a*C. A. Govett, Esq.....	1	1	0
Miss Corbet.....	0	10	0
H. Causton, Esq....	1	0	0
*a*J. H. Gosling, Esq.	0	10	0

ST. GERMANS.

Hon. Sec.—R. Kerswill, Esq.

Per Proceeds of Lecture by Rev. T. H. Scrivener, Oct. 8—			
Admission and Collection at doors	5	2	5

	£	s.	d.
STREATHAM.			
Hon. Sec.—Rev. W. Raven.			
Per Proceeds of Lecture by Rev. H. Geary, Nov. 30—			
Collection at doors	6	12	3
Sale of Publications.....	1	7	6
Subscriptions and Donations—			
James McGrowther, Esq. ...	3	3	0
*a*Mrs. Hyatt	1	1	0
*a*Thomas Southey, Esq.	1	1	0
*a*Miss R. Russell	1	1	0
SHERBORNE.			
Hon. Sec.—T. Farmer, Esq.			
Proceeds of Lecture by Rev. F. H. Scrivener	4	19	4
TUNBRIDGE WELLS.			
Hon. Sec.—Rev. W. Weston Elwes.			
Per Proceeds of Lecture by Rev. G. St. Clair, Sept. 1—			
Collection at doors	4	8	7
Sale of Photographs	0	7	6
Sale of Publications.....	0	6	7
Donations and Subscriptions—			
*a*Miss Anderson.....	1	1	0
Rev. J. Radford Thompson..	0	5	0
TIVERTON.			
Hon Sec.—Major Stehelin.			
Proceeds of Lecture by Rev. F. H. Scrivener	6	9	0
VENTNOR.			
Hon. Sec.—Rev. A. L. B. Peile.			
Per Proceeds of Lecture by Rev. H. Geary, Dec. 6—			
Collection at doors	3	19	9½
Sale of Publications.....	1	2	0
Donations and Subscriptions—			
*a*Col. Hennell.....	1	1	0
*a*Mrs. Huish	1	0	0
WESTON-SUPER-MARE.			
Hon. Secs.—Capt. T. Townsend, R.E., and J. Tetley, Esq.			
Per Proceeds of Lecture by Rev. F. H. Scrivener, Oct. 22—			
Collection at doors	4	12	6
Sale of Photographs.....	0	1	6
WELLS.			
Hon. Sec.—Rev. G. Fagan.			
Per Proceeds of Lecture by Rev. F. H. Scrivener, Nov. 1—			
Collection at doors	6	6	9
Donations and Subscriptions...	0	10	0
WIMBLEDON.			
Hon. Sec.—Rev. T. Whitehead.			
Per Proceeds of Lecture by Rev. H. Geary, Nov. 24—			
Collection at doors	8	6	4

LIST OF MEETINGS AND LECTURES

Delivered for the Fund from September 22nd to Christmas, 1869.

MEETINGS.

Worcester, November 2. { Rev. F. W. Holland. / Rev. F. H. Scrivener.

Newark, November 8. Chairman: The Right Hon. the Speaker. The Meeting was addressed by the Bishop of Lincoln, the Earl Manvers, Ven. Archdeacon Mackenzie, E. Hodgkinson, Esq., M.P., Captain Wilson, R.E., and George Grove, Esq., *Hon. Sec.* to the Fund.

Cheltenham, November 16. Chairman: The Earl Ducie. The Meeting was addressed by the Rev. Dr. Walker, Captain Wilson, R.E., Rev. F. W. Holland, and George Grove, Esq.

Bradford, November 30. Chairman: Rev. Canon Burfield. Speakers: Rev. J. Waring Bardsley; W. Morrison, Esq., M.P.

Greenwich, December 17. Chairman: Rev. Dr. Miller. Speaker: W. Morrison, Esq., M.P.

Reading, December 20. Chairman: J. Wallis, Esq., M.P. The Meeting was addressed by W. Morrison, Esq., M.P., Rev. T. Armstrong, and the Mayor of Reading.

LECTURES.

*** In this list the gross receipts only are given, except in a few cases, where expenses were first deducted.

		£	s.	d.
By the Rev. G. Williams—				
Richmond		8	7	10
Isleworth		1	15	9
Kingston		2	17	9
By the Rev. F. H. Scrivener—				
September 24.	Callington	7	0	0
October 8.	St. Germans	10	2	5
,, 22.	Weston-super-Mare	4	14	0
,, 25.	Devonport	11	15	0
November 1.	Wells	6	16	9
,, 2.	Worcester			
,, 3.	Gloucester			
,, 4.	Malvern	4	0	0
,, 5.	Hereford	6	3	0
December 1.	Sherborne			
,, 2.	Tiverton	6	9	0
,, 3.	Dorchester	6	12	4
By the Rev. J. Waring Bardsley—				
October 11.	Southport	3	6	8
,, 20.	Everton	2	2	2
November 22.	Cheetham, Manchester	5	0	0
,, 26.	Durham	10	0	0
,, 29.	Burnley			
,, 30.	Bradford	2	14	0
December 16.	Halifax			
,, 17.	Sowerby			

			£	s.	d.
By the Rev. Henry Geary—					
October	11.	Maidstone	9	7	1
,,	18.	Faversham	7	0	6
,,	25.	Dorking	20	11	1
,,	26.	Farncombe	4	2	0½
,,	28.	Farnham	7	7	4½
,,	29.	Guildford	6	13	0½
November	1.	Ashford	6	2	9
,,	2.	Ramsgate	10	8	8
,,	8.	St. Leonard's	20	10	3
,,	8.	Hastings	6	5	1
,,	9.	Eastbourne	8	6	0
,,	10.	Brighton	28	3	2
,,	15.	Reigate	11	2	3
,,	16.	Margate	4	15	2
,,	17.	Redhill	4	6	4
,,	18.	Herne Bay	8	15	0
,,	22.	Camberwell, St. Matthew's Schroolroom	7	0	2½
,,	24.	Wimbledon	8	6	4
November	27.	Folkestone	5	7	0
,,	30.	Streatham	11	2	9
December	1.	Uppingham School	18	7	6
,,	2.	Cambridge	5	13	0½
,,	3.	Godstone	5	13	4½
,,	6.	Ventnor	7	2	9½
,,	7.	Ryde	10	12	2
,,	8.	Portsmouth	8	2	5½
,,	9.	Havant	5	0	9
,,	10.	Lewes	8	17	8½
,,	13.	St. Stephen's, Westbourne Park	3	16	4½
,,	14.	St. James's, Clapham Park Road	12	7	5
,,	17.	Esher	8	18	6
By the Rev. James King—					
October	12.	West Hackney	1	0	9
,,	13.	Stoke Newington	1	11	1
,,	15.	West London College	3	4	9
,,	18.	Gainsborough	5	4	0
,,	19.	Boston	5	0	6
,,	20.	Spalding	12	10	0½
,,	22.	Chesterfield	4	8	3
,,	23.	Matlock	5	11	3
,,	25.	Bromsgrove	7	16	0
,,	26.	Wednesbury	4	10	4½
,,	27.	Shrewsbury	4	19	8
,,	29.	Mansfield	18	11	9
November	9.	Jedburgh	6	12	0
,,	25.	Kettering	8	4	1
,,	29.	Newport Pagnell	4	10	0
,,	30.	Olney	6	0	0
December	9.	Leighton Buzzard	3	15	6
By the Rev. G. St. Clair—					
September	21.	Liverpool	6	18	8
,,	22.	Manchester	4	14	1
,,	27.	Warrington	5	15	6
,,	28.	Rochdale	18	16	5½
,,	29.	Manchester	4	4	10
,,	30.	Huddersfield	5	1	4
October	1.	Bowden	3	7	7
,,	4.	Wigan	3	3	11

By the Rev. G. St. Clair (*continued*)—			£	s.	d.
October	7.	Nelson	2	19	4
,,	8.	Bradford	3	10	9
,,	12.	Birmingham	5	4	9
,,	13.	Leicester	8	10	3
,,	14.	Leek	5	9	$4\frac{1}{2}$
,,	18.	Sheffield	1	12	0
,,	20.	Stoke-on-Trent	2	14	11
,,	21.	Crewe	1	9	3
,,	22.	Erdington, Birmingham	1	14	2
,,	26.	Bury	24	1	$11\frac{1}{2}$
,,	27.	Everton...	8	14	9
,,	28.	Crescent Chapel, Liverpool	6	7	6
,,	29.	Birkenhead	7	1	0
,,	30.	Birkenhead (School Address)...	1	12	$7\frac{1}{2}$
November	2.	Fairfield, Liverpool	13	0	3
,,	3.	Manchester	8	14	3
,,	4.	Southport	12	5	$0\frac{1}{2}$
,,	5.	Liverpool	5	1	8
,,	9.	Nottingham	10	1	$4\frac{1}{4}$
,,	10.	York	3	8	4
,,	11.	Bradford	9	6	9
,,	12.	North Shields	3	8	10
,,	15.	Newcastle-on-Tyne	8	10	9
,,	16.	Newcastle	5	6	$6\frac{1}{2}$
,,	17.	Sunderland	12	19	$1\frac{1}{2}$
,,	18.	South Shields	2	6	$6\frac{1}{2}$
,,	19.	Hexham	4	10	7
,,	22.	Headingley	8	4	2
,,	23.	Leeds	4	2	$0\frac{1}{2}$
,,	24.	Liverpool	6	14	8
,,	25.	Walsall	8	16	0
,,	29.	Wallingford	5	17	4
,,	30.	Oxford	6	12	6
December	7.	Buxton...	4	19	$4\frac{1}{2}$
,,	8.	Coventry	8	2	10
,,	9.	Derby	3	17	2
,,	14.	Pershore	1	17	$2\frac{1}{2}$
,,	16. } ,,	19. } Cardiff...	18	13	9

PHOTOGRAPHIC AGENTS

Ashford, Kent—Mr. Thompson.
Bath—Mr. James Pooley, Milsom Street.
Beccles—Mr. J. F. Pells.
Belfast—Mr. M'Gill, Donegal Place.
Birmingham—Mr. Henry Wright, Bennett's Hill.
Bolton—Mr. Winstanley.
Brighton—Mr. Attwood; Mr. George Wakeling.
Cambridge—Mr. Metcalfe.
Carlisle—Mr. J. C. Mason, Castle Street.
Cheltenham—Mr. Westley, Promenade.
Chester—Messrs. Phillipson and Golder, Eastgate Street Row.
Dorking—Mr. W. J. Clark.
Dover—Mr. Goulden.
Durham—Messrs. Andrews and Co.
Eastbourne—Mr. A. Jinman, 147, Terminus Road.
Edinburgh—Ordnance Survey Office, 4, St. Andrew's Square.
Farnham—Mr. Nicholls, 42, Borough Road.
Faversham—Mr. Higham.
Frome—Mr. C. J. Sage.
Glasgow—Mr. David Robertson, St. Vincent Street.
Greenock—Mr. M'Kelvie.
Guildford—Messrs. Andrews and Sons, 61, High Street.
Hastings, St. Leonards—Mr. Dorman.
Herne Bay—Miss Welby, William Street.
Leamington—Mr. Knibb.
Liverpool—Mr. Adam Holden, Church Street.
Maidstone—Messrs. Wickham and Sons.
Malvern—Mr. Cross.
Manchester—Mr. Edwin Slater.
Newark—Mr. W. H. Tomlinson, 30, Stodman Street.
Newcastle-on-Tyne—Mr. H. D. Wilson.
Nottingham—Messrs. Dunn and Co.
Norwich—Messrs. Jarrold and Sons.
Oxford—Messrs. Parker and Co.
Plymouth—Mr. W. Heath, George Street.
Ramsgate—Mr. Wilson.
Reigate—Mr. Shooter, High Street.
Richmond, Surrey—Miss Hamer, 3, Foxton Terrace.
Settle—Mr. Wildman.
Shaftesbury—Mr. Bennett.
Skipton—Messrs. Edmondson and Co., *Pioneer* Office.
Torquay—Messrs. Way and Sons.
Truro—Messrs. Heard and Co.
Tunbridge Wells—Mr. Pelton, 3, Front Parade.
Wells, Somerset—Mr. C. Noad.

WORCESTER—Messrs. Deighton and Sons.
YARMOUTH—Mr. Nall.
YORK—Mr. Sessions, Low Ousegate.

The price of these photographs is 1s. 6d. each. Annual Subscribers of half-a-guinea and upwards, or collectors of that sum, are entitled to receive them at 1s. each. This rule comes into operation after January 1st, and sets aside the old rule by which guinea subscribers were entitled to receive their photographs *gratis*.

LOCAL ASSOCIATIONS.

ALNWICK : *Hon. Sec.*—Edward Allen, Esq.
ASHFORD : *Hon. Sec.*—F. A. Dewé, Esq.
BATH : *Hon. Sec.*—Rev. T. P. Methuen.
BIRMINGHAM : *Hon. Sec.*—Rev. Charles Evans.
BURNLEY : *Hon. Sec.*—Rev. H. Stamer.
BRIGHTON : *Hon. Sec.*—Rev. D. Winham.
BRADFORD : *President*—Rev. Canon Binfield.
CAMBRIDGE : *Hon. Sec.*—Rev. T. G. Bonney, Tutor of St. John's College.
CHESTER : *Hon. Sec.*—The Very Rev. the Dean of Chester.
CHICAGO, U.S.A. : *Hon. Sec.*—Rev. Dr. Patton.
CLIFTON and BRISTOL : *Hon. Sec.*—Rev. C. H. Wallace.
CALLINGTON : *Hon. Sec.*—Rev. F. V. Thornton.
CLAPHAM : *Hon. Sec.*—Rev. R. B. Girdlestone, St. James's, Clapham Park Road, S.W.
CHELTENHAM : *Hon. Sec.*—Dr. E. Wilson.
DALKEITH : *Hon. Sec.*—W. Bryce, Esq., M.D.
DOVER : *Hon. Sec.*—Rev. W. Light.
DUNDEE : *Hon. Sec.*—R. Mackenzie, Esq.
DEVONPORT : *Hon. Sec.*—Rev. H. Everett, J. Venning, Esq.
DORCHESTER : *Hon. Sec.*—Rev. Handley Morell.
DURHAM : *Hon. Sec.*—Rev. J. Dodd.
EDINBURGH : *Hon. Secs.*—Rev. W. Lindsay Alexander, D.D., and A. Keith Johnston, Esq., LL.D.
EASTBOURNE : *Hon. Sec.*—Rev. H. R. Whelpton.
ESHER : *Hon. Sec.*—R. Few, Esq., Wolsey Grange.
FALMOUTH, for the County of Cornwall : *Hon. Secs.*—A. Lloyd Fox, Esq., and W. P. Dymond, Esq.
FROME : *Hon. Sec.*—Rev. T. G. Rooke.
FAVERSHAM : *Hon. Sec.*—
FARNHAM : *Hon. Sec.*—Rev. E. Utterton.
FOLKESTONE : *Hon. Sec.*—Rev. J. W. Watson.
GLASGOW : *Hon. Sec.*—A. B. M'Grigor, Esq.
GREENOCK : *Hon. Sec.*—D. MacDonald, Esq.
GLOUCESTER : *Hon. Secs.*—Rev. J. Bowman and F. Cooke, Esq.
GUILDFORD : *Hon. Sec.*—Col. Thurburn.
HERTFORD : *Hon. Sec.*—Rev. T. Lingley.
HALIFAX : *Hon. Sec.*—Rev. Dr. Hall.

HAVANT: *Hon. Sec.*—Rev. F. P. Seymour.
JEDBURGH: *Hon. Sec.*—G. Fyfe, Esq.
KETTERING: *Hon. Sec.*—Rev. H. Jackson.
LEEDS: *Hon. Sec.*—Edward Atkinson, Esq.
LIVERPOOL: *Hon. Sec.*—Rev. C. D. Ginsburg.
LEWES: *Hon. Sec.*—Rev. R. Straffen.
MALVERN: *Hon. Sec.*—Rev. G. Fiske.
MANCHESTER: *Hon. Sec.*—Rev. W. Crane.
MIDDLESBOROUGH: *Hon. Sec.*—Rev. Vyvyan H. Moyle.
MANSFIELD: *Hon. Sec.*—T. W. Clarke, Esq.
MARGATE: *Hon. Sec.*—Rev. G. Collis.
MAIDSTONE: *Hon. Sec.*
NORTHAMPTON:
NOTTINGHAM: *Hon. Sec. pro tem.*—Rev. F. Morse.
NEWCASTLE: *Hon. Sec.*—Thomas Hodgkin, Esq.
OLNEY and NEWPORT PAGNELL: *Hon. Sec.*—Rev. J. P. Langley.
OXFORD: *Hon. Sec.*—Rev. Professor Rawlinson, and Rev. Edwin Hatch.
PERTH: *Hon. Sec.*—R. Jameson, Esq.
PLYMOUTH: *Hon. Secs.*—J. B. Rowe, Esq., and J. Shelley, Esq.
PORTSMOUTH: *Hon. Sec.*—Rev. N. R. Devereux.
RYDE: *Hon. Sec.*—Rev. J. Le Mesurier (Bembridge).
REIGATE and REDHILL: *Hon. Sec.*—W. Wilson Saunders, Esq.
RAMSGATE: *Hon. Sec.*—Mr. Wilson, High Street.
ST. LEONARDS:—Mrs. Alexander, Brunswick House, Marina, has kindly consented to receive subscriptions.
ST. GERMANS: *Hon. Sec.*—R. Kerswill, Esq.
SHERBORNE: *Hon. Sec.*—J. Farmer, Esq.
SOWERBY: *Hon. Sec.*—Rev. A. L. W. Bean.
STREATHAM: *Hon. Sec.*—Rev. W. Raven.
TUNBRIDGE WELLS: *Hon. Sec.*—Rev. W. Weston Elwes.
TIVERTON: *Hon. Sec.*—Major Stehelin.
UXBRIDGE: *Hon. Sec.*—J. Hunt, Esq., F.R.G.S.
VENTNOR: *Hon. Sec.*—Rev. A. L. B. Peile.
WARMINSTER: *Hon. Sec.*—J. Morgan, Esq.
WESTON-SUPER-MARE: *Hon. Secs.*—Capt. T. Townsend, R. E., and J. Titley, Esq.
WELLS: *Hon. Sec.*—Rev. G. Fagan, Rodney Stoke Rectory, Wells.
WORCESTER: *Hon. Sec.*—Rev. Francis J. Eld.
WIMBLEDON: *Hon. Sec.*—Rev. T. Whitehead.

PUBLICATIONS OF THE SOCIETY.

1. Report of Preliminary Meeting, 1865.
2. Captain Wilson's Expedition, 1866.
3. Meeting at Cambridge, 1867.
4. Annual Meeting, with Lieut. Warren's Report. 1868.
5. Statement of Progress, January 1st, 1869.
6. Lieut. Warren's Letters and Reports, with lithographed plans.

7. Lieut. Warren's Notes on the Valley of the Jordan and Excavations at Ain es Sultan (Jericho).
8. Dean Stanley's Sermon on the Exploration of Palestine. Price 6d.
9. Quarterly Statement. No. I. April 1st, 1869.
   Contents: Statement by Committee.—Narrative of the Proceedings of the Fund.—"Rob Roy" on the Works.—Lieut. Warren on the Temple of Herod.—Lieut. Warren's Letters (XXXIV. to XXXV.), with two illustrations, &c., &c., &c.
10. Quarterly Statement. No. II. June 24th, 1869.
    Contents: Statement by Committee—Mr. Deutsch on the Letters at the S.E. Angle of the Haram at Jerusalem. — Captain Wilson on the Synagogues of Galilee, with an illustration.—Mr. Rogers's Excavation of Tell Salahiyeh. — Mr. Eldridge's Meteorological Observations on Mount Lebanon.—Mr. Simpson on Robinson's Arch.—The last Report of the Executive Committee.—Lieutenant Warren's Letters, with an illustration.—List of Subscriptions, &c.
11. Quarterly Statement. No. III. September 30th, 1869.
    Contents: Statement—Rock-cut Tombs of Palestine, by Captain Wilson—Rev. Dr. Zeller on Kefr Kenna—Tables of Latitude and Longitude—Comparative Holiness of Mounts Zion and Moriah—Notes: Gold in Palestine; A Singular Custom—Report of Annual Meeting—Meteorological Observations. By James Glaisher, F.R.S.—Lieutenant Warren's Letters continued, No. XLIII. to XLV.
12. Quarterly Statement. No. IV. January 1st, 1870.
    Contents: Statement of Progress—The Ceremony of the Dosch at Baalbec, by Mr. Morrison—The Site of Ai, by Captain Wilson—Results of Meteorological Observations taken at Beyrout, Syria, by James Glaisher, F.R.S.—The Desert of Tîh—Notes on a Visit to Saida, &c., July, 1869, by Captain Warren—The Coleoptera of Palestine, by Mr. Crotch—Remarks on a Visit to 'Ain Jidy and the Southern Shores of the Dead Sea in Midsummer, 1867, by Captain Warren.

Nos. 5, 9, 10, 11, and 12 may be had by all subscribers. 9, 10, and 11 are sold at 1s. each to non-subscribers, and 6d. each to subscribers, after the first copy.

A complete set of the lithographs, now 40 in number, may be had by forwarding stamps at the rate of 2d. for each lithograph required.

LECTURES.

THE following gentlemen are authorised to give Lectures on behalf of the Fund:—

Rev. F. K. Scrivener, St. Gerran's Rectory, Grampound, Cornwall.
Rev. J. W. Bardsley, Bootle, Liverpool.
Rev. Henry Geary, Herne Bay.
Rev. James King, St. George's, Hanover Square.
Rev. G. St. Clair, Banbury.
Rev. Daniel Kerr, Dunse, N.B.
Edward Allen, Esq., Alnwick.

THE

PALESTINE EXPLORATION FUND.

STATEMENT OF PROGRESS.

The contents of the present number of this Quarterly do not call for any detailed preliminary observations. Their importance will be readily perceived. The work of the shafts will be found in the Letters of Captain Warren. They have yielded results of great interest. It will be remarked that the date of the Report is the 22nd of December. No account has been received since that time, Captain Warren's time having been chiefly occupied with the completion of the other papers here printed. We must therefore wait till the next quarter for the excavation work of this. It was stated in the introductory paper to *Quarterly Statement* No. IV. that a woodcut of the Haram, with the shafts noted, and a paper on the results, was proposed to be presented to subscribers this quarter. It is, however, found desirable to postpone this for the present, because Captain Warren is himself expected to be in England this summer, and under his superintendence the plan could be made with a far greater degree of exactness.

The principal work described in Letter XLVI. is that at the north-east angle. From it Captain Warren deduces certain inferences of some interest. The city wall, to north of St. Stephen's Gate, has but a few feet of rubbish, which seems to show that there has been but little destruction of old walls. Further, it rests upon 10ft. of concrete, and there is no appearance of an older wall. Perhaps, then, St. Stephen's Gate may not stand upon the site of the old wall. And of what period are the stones, now hidden by plaster and concrete, of the northern end of Birket Israil?

The Great Rock-cut Aqueduct in the Valley of Kedron, near the "Well of Joab," an account of which is given in p. 140 has, as we learn from a brief note in a more recent letter from Captain Warren,

been found to come to an end. This splendid piece of engineering stops unfinished and suddenly, and the problem of the design of it has not yet, apparently, been solved by Captain Warren.

It will be remarked that the so-called "Gennath Gate" has been found to rest, not on the rock, but in "made earth mixed with pottery, similar to that found at the lowest point at the south-east angle of the Haram Area."

The letters on the "Moabite Stone" give its history, so far as is at present known. The two accounts furnished by Captain Warren, dated respectively January 21st and March 11th, are given with the correspondence on the subject that has already appeared in the *Times*. It is to be hoped that information will very shortly be received which will enable a correct translation to be made. Photographs of Captain Warren's two full-sized tracings will be taken immediately, and issued to subscribers at the lowest possible cost.

It was thought highly desirable that so complete and detailed an account of the temples of Cœle-Syria, as that published in this number, should not appear without one or two illustrations, taken from the extremely careful tracings (fifteen in number) sent home by Captain Warren. These tracings are to be seen at the Society's office. Accordingly, two have been selected, by the advice of Mr. Fergusson, for illustration, and have been presented to subscribers. The temples themselves are of the late Roman period.

The paper of Dr. Sandreczki, whom the Committee has had to thank for an extremely careful and useful list of Arabic names, which it is hoped to publish shortly, will be read with great interest, as an attempt to solve a question which has met with various answers.

The first two letters received from Mr. Palmer are now published. They leave him, with his companion Mr. Tyrwhitt Drake, on the edge of the Desert of the Tih. Up to the date of his second letter, he had been occupied in completing the Geographical Survey of the Peninsula, and has sent home a map of the very small piece of country left incomplete by the Ordnance Survey.

The short Arabic Glossary is published at the instance of several subscribers. It is extracted from the "Handbook to Syria and Palestine," by kind permission of Mr. Murray.

As a great many requests have been made to have copies of the

marks and characters found at the north-east and south-east angles of the Haram Area, it has been thought desirable to have them photographed. This is now done, and subscribers can have copies of the four photographs of these interesting letters at the same price as the other photographs in the Society's series.

Reports will be found of upwards of eighty Lectures delivered for the Fund in the last three months. Through the agency of these, the work of the Fund is made known, and friends are especially invited to join in promoting these meetings.

Attention is invited to the Treasurer's statement appended to the balance-sheet of the year 1869 (see page 261). It will be found that there are two main streams of expenditure—the larger on the exploration itself, the smaller, on the subscribers who support the exploration. And while the Committee recognise the duty of making known to their subscribers the results of their work, they hope that subscribers themselves will aid them by disseminating copies of their publications, and by advocating their claims to support.

THE MOABITE STONE.

CAPTAIN WARREN'S FIRST ACCOUNT OF THE INSCRIPTION FROM MOAB.

January 21, 1870.

In the summer of 1868 a gentleman, riding past Diban, saw a stone with characters on it, and his observations appear to have excited the curiosity of the natives, as about six weeks after a man from Kerak came to tell me of a black stone with writing on it, and wanted me to go over and see it. On making inquiries, I heard that others were moving in the matter, and I did nothing whatever for twelve months, when the whole story became current in Jerusalem, and M. Ganneau and I were told the story by a third party, and we were both astonished to hear that an attempt had been made to get the stone before a squeeze had been taken. I heard nothing more of the matter until my return from the Lebanon in November, when an "Adwan" met me on my way from Jaffa, who said he had come to welcome me back. But thinking he had not come across the Jordan merely for that purpose, I went on in front with him, and, after several preliminaries, he told me that there had been an inscribed stone across the Jordan, which the natives had broken sooner than let some Franks take it, and that the French Consul had tried to get a squeeze of it, and had failed. On seeing that there really was a chance of the inscription getting lost to the world, I gave the man squeeze paper to apply to the broken portions of the stone, or to the whole, if by any chance it still remained intact.

He appeared in a few days with a squeeze of a Nabatean inscription, which at first he said was from Diban; but when he found that would

not do, he said that the stone was broken, so he had done what he could, and had brought this from Um er Russas. I sent him away. In the meantime I saw M. Ganneau, who told me that he had been more fortunate than I supposed, and actually had got a squeeze of the whole stone, but a very imperfect one.

About a week ago my Bedouin came up again with squeezes of broken portions of the stone, so that there can be no doubt that it really is broken. I wrote the same day to M. Ganneau, and offered him the use of them to assist him in his work, as I considered the squeezes excellent. He said he had also got duplicates of these squeezes the same day; but as they were not each perfect in all their parts, he took copies of mine, and offered to give me a translation of my squeezes and a memorandum of the sense of the whole, so that there might be a simultaneous publication of the matter in the papers of Paris and London.

The Bedouin tells me that the Modir of Salt, acting under the instructions of the Governor of Nablus, had put pressure upon the people with regard to this stone, and had so exasperated them, that sooner than give it up they had put a fire under it and thrown cold water on it, and so broken it, and had then distributed the bits among the different families, to place in the granaries and act as blessings upon the corn, for they say that without the stone (or its equivalent in hard cash) a blight will fall upon their crops.

Letter I.

MR. GROVE'S LETTER TO THE "TIMES."

SIR,—Captain Warren, R.E., the active and able agent of the Palestine Exploration Fund at Jerusalem, has made a discovery* which promises to be of great importance, and of which I hasten to communicate the main particulars, reserving a more detailed description for a future letter.

A few months ago Captain Warren heard of a stone covered with writing, which was said to be existing at Dhibân, the ancient Dibon, on the east side of the Dead Sea, in the heart of the old country of Moab. The stone was then whole, but on finding that the Franks were inquiring for it the Arabs broke it up into several fragments, which they hid in the granaries of the neighbouring villages. By the tact and perseverance of Captain Warren and M. Ganneau, of the French consulate, the whole of these pieces appear to have been recovered. Captain Warren is in possession of two of them; others, as I understand, are in M. Ganneau's hands. The larger of the two, 22in. by 14in., belongs to the centre of the lower part of the stone, and the smaller, 12in. by 9in., to the right hand top corner. The stone itself appears from Captain Warren's sketch to be 3ft. 5in. high, by 1ft. 9in. wide. Its sides taper very slightly from the bottom upwards, and the top is rounded to nearly a semicircle. The writing runs across the stone in straight lines about 1¼in. apart. At present we have only full-sized tracings of our two pieces, but the others have been sent to Paris, and copies and "squeezes" are on their way to us. Meanwhile not a moment has been lost in sending the tracings to

* See Mr. Grove's second Letter, p. 179.

Mr. Deutsch, of the British Museum, the eminent Semitic scholar, to whom the Palestine Fund has been more than once deeply indebted, and I subjoin a letter from him about them.

I conclude with two remarks :—1. If the stone be a Moabite record it is the first fragment of the literature of that people that has yet been encountered ; for though chapters xxii., xxiii., and xxiv. of the Book of Numbers, and verses 5 to 8 of the 6th chapter of Micah, are probably from Moabite sources, we have no means of knowing how far they have suffered in adapting them to the Hebrew records. The indications of Isaiah xv. and xvi. imply that the nation of Moab was more civilised and important than we are apt to suppose, and the general interest attaching to the discovery of such a portion of its literature is therefore naturally great. But (2) if the "Mesha" whose name appears in the first line is the hero of the tragical story of 2 Kings iii., then we have indeed a discovery which may well make us stand breathless till the whole document has been deciphered. To find a passage of Moabite chronicle so parallel in date to a portion of the Bible, is an event of no mean importance ; and it should stimulate us to further researches in the same direction.

I may add that Captain Warren's labours in Jerusalem are not abated, and that they have lately yielded remarkable results, which I hope shortly to send you.

The Fund has recently sent out Mr. E. H. Palmer—whose competence in vernacular Arabic was fully proved in the late Ordnance Survey of Sinai—and Mr. Tyrwhitt Drake to that vast tract of desert which lies between Sinai and the Holy Land, with the view to discover whether traces can be found of the wanderings of the children of Israel. These gentlemen are carrying on their mission with great vigour and apparent accuracy, and I hope on a future occasion to lay some of their discoveries before your readers. At present they would require maps for their elucidation.

Your obedient servant,
GEORGE GROVE, Hon. Sec. Palestine Fund.

Office of the Fund, 9, Pall Mall East, Feb. 8.

"My dear Grove,—I hasten, in reply to your message, to transmit to you the following preliminary notes for the information of your Committee.

"The Moabite inscription, of parts of which you have forwarded me tracings, is of very great importance indeed. Being at present in possession of about a third of the whole only—this third being copy of squeezes taken from two mutilated fragments of the upper and lower portions of the monument in question—I refrain from dwelling on its apparent general purport. The 26 lines before me (eight and 18 respectively), averaging from seven to 24 letters to a line, are incomplete in every single instance. A few exceptions apart, both the beginning and the end are wanting. About another third of the letters thus extant are marked by the hand of the copyist, Captain Warren, as doubtful.

Finally, certain gaps, several inches wide, occur at times in the very midst of these mutilated characters. And yet, even in this piteous state, the document reveals things of the utmost moment. Leaving what conjectures I have formed till such time when a sight of the (promised) fuller text shall confirm them or cause me to reject them, I shall content myself with a few items, which are absolutely incontestable even now.

"The document starts with the words 'I, Mesha, son of Ch . . .' Whether this be the Mesha who, driven at bay by the three allied armies of Judah, Israel, and Edom, sacrificed his son to save his country, or not, I cannot yet determine; but there is no special reason against the assumption. A king of Mesha's prowess might have spoken of his doings as proudly as is done on this monument. And, what is of much greater weight, the character of the writing, which, in default of a better word, we must still call 'Phœnician,' looks even older than that of many of the Assyrian (Mesopotamian) bilingual cylinders in the British Museum, the date of which is, at the very least, as old as the ninth century B.C., the time of this Biblical Mesha. It is, indeed, the palæographical part of the document which at present seems paramount. Apart from the very primitive character of the whole alphabet as it here occurs, there is one letter (the Kaph) which, to my knowledge, is found on no other Semitic remnant in this peculiar 'Moabite' shape. Next to this point ranks always for the present the geographical importance of this record. There start up with absolute clearness such names as Beth-Bamoth, Beth-Baal-Meon, Horonaim, Dibon, well-known Biblical cities, either situate in Moab ('the names whereof were changed by the Israelites,' whence their variations), or temporarily held by Moab. These places, among others, King Mesha on this stele boasts of having 'built.' Indeed, the words 'I built' occur so frequently that they form welcome landmarks to the decipherer. Besides these places which occur in the Bible, I find 'Karkha,' which I venture to identify with Kerek, the later name of the whole country, also the name of a hamlet still in existence. But apart from this, mention is also made repeatedly of 'Israel,' the rival, often hostile power, and 'Chemosh,' the national God of Moab.

"Let this suffice now. The historical as well as the linguistic purport of this find are both so startlingly obvious that nothing need be added at present. I would only beg to urge on your Committee the expediency of leaving no means untried to get possession of as much of this unique Moabite relic as may survive.

"E. DEUTSCH."

Letter II.

MR. DEUTSCH'S LETTER TO THE "TIMES."

SIR,—Notwithstanding very numerous inquiries, I have refrained till now from addressing you further on the subject of the Moabite stone. Since my first letter of the 8th instant appeared in the *Times*, no further original materials had come to hand either from Jerusalem or Paris.

I had received, through the kindness of Count de Vogüé, the publi-

cation containing M. Ganneau's restored text; but while nothing could have been more gratifying than the speed with which this document had been prepared and given to the world, I deeply regretted not to be able to avail myself of it as fully as I would fain have wished.

This restoration, which still only represented mutilated fragments of the original text, had been made up from three or four different sources. The first being certain torn rags (*lambeaux fripés et chifonnés*) of a rubbing taken of the whole stone *in situ*. The characters of this rubbing had, according to M. Ganneau, only left "imperceptible traces." The second element of the restoration were those portions of the broken stone of which Captain Warren had obtained the rubbings independently. On a minutely accurate tracing from these my own first account was based. Thirdly, there had been used for this "restoration" certain small chips of the stone itself; and, fourthly, a copy, "made by an Arab, but indecipherable in itself," of a certain number of lines.

Being in possession of one of these different elements only, viz., the tracing of the two large pieces—indeed, the most important of all—I could not but accord my fullest admiration to the great ingenuity brought to bear upon that restoration. If, in spite of it, I hesitated with my own reading and rendering, such hesitation was due to several causes.

In a monument of this kind all and everything depends upon almost microscopic accuracy. Indeed, the minutest fraction of a stroke, a dot, the bend of however insignificant an appendage to a character, is sometimes of the most vital moment; altering the letter, the word, the structure, the whole sense and purport. Many and many a time has a doubtful sign to be turned to light and shade, and to be subjected to magnifying processes before the decipherer can satisfy himself as to its real original shape. The text in question, however, so far from being an almost photographic *fac-simile*, was avowedly but a lithographed reduction to the third of the size of those characters which M. Ganneau had sent to Paris as his own readings. Neither was there time left to Count de Vogüé for indicating in this lithograph the different materials from which it was made up, save with regard to the two larger fragments. There was no mark as to where the chips came in, where the "rags" were used, or where the "copy of the indecipherable letters" was made to fill up a gap. There, further, was no indication as to whether certain empty spaces belonged to the original stone or were *lacunæ* of destruction.

The editor further spoke of "all the words being divided by points, and the text itself into verses by vertical strokes." Could this *dictum* have been taken literally, such divisions would, indeed, have afforded an invaluable guidance, even in the midst of this destruction. But, although dots and strokes occurred up and down the text, they were absent at times where there was a distinct break, while they were forthcoming at other times, not only in the midst of words, but of letters—in Captain Warren's copy. Also did this text exhibit on closer inspection (owing, no doubt, to the hurry of the preparation) certain little discrepancies with the editor's own Hebrew transcript, from which

he made the translation. Thus line 14 commences in the text with a clear and distinct M where the transcript exhibits Sh: which reading is followed by the translation. The difference thus produced is rather remarkable. With the *m* the word would mean "the next day"; with the *sh* it is rendered "*de la jeunesse (aurore)*." In line 11, the *alef*—which alone would have made the word in question into the imperfect, "*et je tuais*" of the translation—is wanting in the text, but found in the transcript. In line 19 an imperfect *H* is emendated into a *G*, whereby the passage in question becomes, as translated, "*Chamos le* (?) *chassa*." On the other hand, there were patent several vital discrepancies between M. Ganneau's and Captain Warren's copy of the same pieces—not merely where Captain Warren had marked letters as doubtful, but where he had given them as unimpeachable. Thus the word *Jehovah* was not forthcoming in Captain Warren's copy, while it was clear in the other. Again, where M. Ganneau had "*C'est moi qui ai offert l'holocauste*," I should have read by Captain Warren's copy, "and I dug cisterns." If M. Ganneau had "*Fasse chaque homme un puits dans sa maison*," Mr. Warren traced a distinct additional letter before the supposed word *man*, which made that meaning and structure nugatory.

Yet while such items made it imperative upon me to wait for further information, I could not but differ on some points with the translation even as made from this lithograph. In line 4 I would have rendered "all mine enemies," instead of "*tous les deux*"; for "*la dominion*" I would have substituted the well-known place *Nebo*; and whether or not Karkah was the present Kerek, it seemed to me unquestionably to be the name of a place, and neither "esplanade" nor "*plate-forme*," &c. But such matters were, as I said, not to be pursued on a doubtful basis. Hence my silence.

This morning, however, two letters have come to hand, both of considerable importance—the one from Jerusalem, the other from Paris. The first is from Captain Warren, enclosing a new and full-sized tracing of the larger of the two fragments brought to him since by his Bedouin, which throws a great deal of new light upon the reading, exhibiting some entirely new characters in some places, supplementing others which were doubtful, and correcting many groups of previously different appearance. Though even now I have to confess my inability to give a very lucid translation of either the whole or a considerable part of the monument, certain things have become much clearer to me than they were before. Among other things I have found the *Diblataïm*, which I had not in my first copy. The second letter is from Count de Vogüé, in reply to my inquiry as to the originals of M. Ganneau's text. He informs me that he has not yet received the "paper squeezes" of the whole monument from that gentleman. "The only thing," he says, "he sent me with his memoir is a tracing made from the squeezes." M. de Vogüé fully agrees with me as to the inadvisability of working upon "this incomplete text"; and, what is of still greater moment, he further tells me that since publishing the pamphlet he has received from M. Ganneau a letter, "with emendations and new readings, which

exhibit the first part of the inscription in an *entirely new light.*" A few days hence he hopes to be in possession of all the materials, and he most kindly promises to place photographs of them at my disposal, without delay.

It will be well, therefore, if both the learned and the public at large hold their hand for a brief space yet. At this moment there is but one thing certain—that, whether we ever recover the whole of the stone, the fate of which is still uncertain, or must remain satisfied with but half-intelligible fragments, the gain to Palæography and Semitic science is already enormous. It is unquestionably—whatever the precise date of this King Mesha—the very oldest Semitic lapidary record of importance as yet discovered. And, apart from certain geographical and other data given in it which are already incontestable, it illustrates to a hitherto undreamt-of degree the history of our own writing—I mean that which we all use at this hour. Nearly the whole of the Greek alphabet is found here, not merely *similar* to the "Phœnician" shape, but as identical with it as can well be. Not merely such letters as the Δ, P, M, N, Σ, E, O, Q (Kappa), &c., but even the M—one of the letters supposed to have been added during the Trojan War by Palamedes (*Pliny*, vii. 56; *Plut. Qudest. Symp.* ix. 3), because not extant in the original "Cadmean" alphabet—is of constant occurrence here (as *Samech*). Further will the knotty Digamma question receive a new contribution by the shape of the *vau* in this monument, which is distinctly the Greek Υ—another letter of supposed recent origin. Of the new form of the *kaph*, identical with the Greek K, I have already spoken in my first letter. And another thing will become clear—viz., that the more primitive the characters, the simpler they become; not, as often supposed, the more complicated, as more in accordance with some pictorial prototype. Yet on these and a number of other strikingly interesting points suggested by this precious relic I will not here enlarge.

One remark more; the letter *Teth*, identical, down to the latest Phœnician stage, with the Greek θ, does, curiously enough, not occur in the whole text of either copy.

I hope shortly to be able to report further progress.

Feb. 28. E. DEUTSCH.

---

*Letter III.**

M. GANNEAU'S LETTER TO THE "TIMES."

MONSIEUR,—Je viens de lire dans un numero *du Times* du 10 Février, qui m' arrive aujourd'hui seulement à Jérusalem, les deux lettres de MM. Grove et Deutsch relatives à la découverte de la stèle Moabite du roi Mesa. Comme mon nom figure incidemment dans la relation de cette découverte, je vous serais obligé de vouloir bien insérer le quelques détails rectificatifs suivants.

Il y a fort longtemps que j'avais connaissance de ce précieux monu-

* This appeared in the *Times* of March 22nd.

ment, comme en fait foi une lettre datée dù 20 Octobre, 1869, et adressée par moi à la *Revue de l'Instruction Publique* (17 Février, 1870). Dès le mois de Novembre je possédais un estampage complet, mais, malheureusement, en fort mauvais état, de la pierre intacte. Plus tard, lorsqu'elle fut mise en pièces, j'obtins, en même temps que mon honorable ami le Capitaine Warren, des estampages des même deux grands fragments que ceux dont il a été envoyé copie à M. Grove. A l'aide de mon premier estampage total, qui est aujourd'hui l'unique représentation de l'ensemble du monument, et des estampages partiels qui m'avaient également été apportés, j'avais pu, dès le 18 Janvier, reconstituer la majeure partie du texte entier, et en fixer le sens général. J'envoyai aussitôt à Paris une note destinée à me faire prendre date et à m'assurer la prioité de la découverte et de l'interprétation. Vous trouverez ci-joint la teneur de cette note, insérée le 5 Février au *Journal Officiel*, et reproduite le 6 par le *Journal des Dèbats*. Je vous serais obligé d'en mettre le contenu sous les yeux de vos lecteurs. Le 22 Janvier je fis parvenir à l'Académie des Inscriptions et Belles Lettres, par le bienveillant intermédiaire du Comte de Vogüé, une première communication, comprenant: (1) le monument restituté en entier, sauf quelques lacunes minimes; (2) une transcription générale en caractères Hébreux carrés; (3) un essai de traduction; (4) un commencement de commentaire détaillé, où les principales questions de chronologie et d'identifications historiques étaient étudiées; (5) une relation de la découverte. Je remis, le même jour, à mon honorable ami le Capitaine Warren une petite dissertation, extraite de mon mémoire, et dans laquelle je donnais l'explication due deux fragments dont il possédait, comme moi, un estampage, avec transcription, traduction, et discussion historique.

Cette note fut transmise par le Capitaine Warren à M. Grove, avec la copie des deux morceaux. Aussi n'est-ce pas sans un certain étonnement que je retrouve dans la lettre de M. Deutsch du 10 Février, écrite à la demande de M. Grove, des conclusions tout-à-fait semblables aux miennes sur l'interprétation de ce monument, sans qu'il soit fait mention de mon travail, qui cependant devait être en les mains de M. Grove.

Je désirerais vivement que les faits fussent rétablis dans leur exactitude; je ne doute pas un seul instant de la loyauté de deux honorables gentlemen, et je suis persuadé qu'il me suffira de leur signaler cette regrettable omission pour qu'elle soit aussitôt réparée. Je puis, d'ailleurs, invoquer le témoignage du Capitaine Warren, la publication de ma note au *Journal Officiel* cinq jours avant la lettre de M. Deutsch, et enfin le témoignage de M. Grove lui-même, qui doit avoir encore entre les mains ma petite dissertation, jointe à la copie des fragments, et peut la faire imprimer, pour lever toute difficulté. Ce serait le meilleur moyen de résoudre cette question délicate.

Je saisis cette occasion pour faire connaitre au monde savant que cet inestimable monument, qu'on pouvait croire un moment perdu pour la science, lui appartiendra désormais presqu' en entier. Je possède, en effet, en dehors de l'estampage général mentionné plus haut (pris

sur la stèle intacte), et de quelques morceaux plus ou moins importants, le fragment même de basalte qui contient le nom du roi Mesa, et environ huit lignes d'écriture; c'est le morceau capital, et comme la clef de tout le monument. Quant à l'autre grand fragment, il est plus que probable qu' au moment où cette lettre paraîtra il m'aura déjà été livré par les Bédouins de qui je l'ai acquis.

Agréez, Monsieur, l'assurance de ma haute considération.

CHARLES CLERMONT-GANNEAU, Drogman-Chancelier intérimaire du Consulat de France en Palestine.

Jérusalem, 2 *Mars*, 1870.

"Un monument archéologique d'une importance capitale vient d'être découvert par M. Ch. Clermont-Ganneau, drogman-chancelier intérimaire du consulat de France à Jérusalem. C'est une grand stèle de basalte trouvée à l'est de la mer Morte, sur le territoire des anciens Moabites.

"Sur cette stèle est gravée une inscription de plus de trente lignes, en caractères Phéniciens, débutant par ces mots:—'Moi, Mesa, fils de Chamos.' Or, Mesa est un roi de Moab, mentionné dans la Bible, et contemporain du prophète Elisée, de Josaphat, roi de Juda, d'Achab, d'Ochozias, et de Joram, rois d'Israël. Les troisiéme et quatrième chapitres du livre II. des *Rois* nous donnent le récit détaillé de la campagne entreprise, de concert par Joram et Josaphat, contre Mesa, roi de Moab. La stèle Moabite raconte également la lutte de Mesa contre le roi d'Israël, et énumère les villes construites et les temples élevés par Mesa, et consacrés par lui au dieu national des Moabites, à Chamos.

"L'âge de ce monument est déterminé matériellement par le synchronisme qu'il offre avec l'histoire Juive; il remonte à neuf siècles avant l'ère Chrétienne, et est postérieur d'environ une centaine d'années au règne de Salomon. Il est antérieur de près de deux siècles au célèbre sarcophage d'Echmonnazar, roi de Sidon.

"Les caractères Phéniciens avec lesquels est écrite l'inscription présentent un aspect archaïque qu'on ne retrouve au même degré dans aucun des monumens Phéniciens connus jusqu'ici. L'inscription se déchiffre cependant avec une certitude pour ainsi dire absolue, parce que tous les mots sont séparés par des points, et toutes les phrases divisées par des barres verticales. La langue est, sauf quelques légères différences orthographiques, de l'Hébreu pur, et l'on croirait, en lisant ce texte, lire une page de la Bible; la coupe par versets et le parallélisme des expressions complètent l'illusion. Les Moabites appartenaient d'ailleurs, comme on le sait, à la même race que les Hébreux.

"Ce texte précieux, qui permet de contrôler, par un document contemporain des événemens, la valeur des récits historiques de la Bible, et qui apportera à l'ethnographie, à la mythologie, à la géographie, à la linguistique, et à la paléographie les plus riches contributions, vient d'être

envoyé à l'Académie des Inscriptions par M. Ch. Clermont-Ganneau, avec une dissertation qui sera immédiatement publiée."

Letter IV.

TO THE EDITOR OF THE "TIMES."

March 23rd.

Sir,—As soon as my letter in the *Times* of the 3rd inst. reaches M. Ganneau it will reassure him on two points—1, that through the kind offices of M. de Vogüé he has secured that *priorité de l'interprétation* which he appears to have so much at heart; 2, that so far from my having at any time arrived at *conclusions tout à fait semblables sur l'interprétation de ce monument*, I have as distinctly as possible protested against the very possibility of *conclusions* in the present state of the text—save inasmuch as, to my very great regret, I was compelled, from reasons very explicitly stated in that letter, to reject the bulk of M. Ganneau's *restoration*, transcript, interpretation, and all.

I might well leave the matter here, merely referring to my previous letters. But as I am desirous that not the slightest shadow should rest upon a discovery of this kind, I may briefly state the nature of the document handed over by M. Ganneau to Captain Warren for transmission to England, in exchange for the avowedly better tracings which the latter had obtained and placed at his disposal. It was not a tracing of his own *estampage de la pierre intact*, but contained, in the first place, that "dissertation," of which he darkly hints that I have made secret use. He therefore wishes to see it printed in your columns. His desire has long been anticipated. The fact is that it appeared in your columns before my own first letter. For it consists simply of that rather startling paragraph which had made the round of the foreign and English press even before Captain Warren's tracings had reached England. It was first given to the world, according to M. Ganneau's own showing, in the *Journal Officiel* of February 5th. The only thing suppressed in that paragraph was the account of that strange "restoration" on which I have since dwelt at some length.

Also have I dwelt on its *pour ainsi dire absolue* certainty of M. Ganneau's deciphering, on its *l'on croirait en lisant ce texte lire une page de la Bible*, the "*illusion*" being *complétée par la coupe par versets et le parallelisme des expressions;* and, finally, on its confident statement that "all the words were divided by points, and all the phrases by vertical strokes"—to all of which assertions Captain Warren's tracings gave the most distinct denial. So far from reading out of them, or into them, "a page of the Bible," I was fain to confess in both my letters that, important as the stone seemed to me, I could only be perfectly sure as yet of certain geographical names (one not hitherto known, the same which M. Ganneau rendered *esplanade*, or *plate-forme*) and of certain special items of palæographical import with reference to Assyrian and "Mesopotamian" relics in the British Museum.

I did not even perceive that Mesha's father was Chemosh, as it appeared from that "dissertation." All I could see clearly in my copy

was a Ch——; nay, I even refrained from, for the present, conclusively identifying this Mesha with the only Biblical Mesha known, though I saw no very special reasons against it. As for finding in my copy anything like the "3rd and 4th Chapters of Kings," I might as well have found in it an account of the battle of Waterloo.

M. Ganneau's document in question further contained a so-called translation "*des mots*," strictly limited to those which he read out of Captain Warren's fragments.

As the whole translation by M. Ganneau of his full text has likewise appeared in your columns (of the 22nd of February), his wish has thus far also been anticipated. My second letter has likewise dealt with this interpretation.

If common courtesy prevented me from publicly giving any opinion on the like labours, while they only existed in a fragmentary and MS. state, I have, since Count de Vogüé made them public property by his pamphlet, spoken with no uncertain sound. But even then I would fain have been silent had it not been out of regard for the learned world, whose time I did not wish to be wasted any longer on what I knew to be, and what the editor, Count de Vogüé himself, has since called an unsound basis.

I regret to add that I still look in vain for the photographs of M. Ganneau's various materials, the originals of which do not yet seem to have reached Europe.

E. DEUTSCH.

Letter V.

TO THE EDITOR OF THE "TIMES."

Sir,—As M. Clermont-Ganneau has expressed his astonishment at my having passed over the "little dissertation" which he says was sent me by Captain Warren, I beg leave to say (though I should otherwise have remained silent) that I have never seen that document, and know nothing whatever of its existence, though I infer from Mr. Deutsch's letter in your columns that he has had it. As, however, my object was to discover for myself, through the medium of Mr. Deutsch, what the tracings sent home by Captain Warren really meant, I should not have advised the use of M. Ganneau's "interpretation," or "dissertation," even had I possessed it, and Mr. Deutsch's letter makes it pretty plain that he acted on the same independent plan.

I was certainly wrong in my letter of the 8th of February, in speaking of Captain Warren as the discoverer of the stone. It appears that the real discoverer was Mr. Klein, of the Prussian Community in Jerusalem, who first saw it many months ago. No doubt, therefore, my word "discovery" was wrong; but, seeing that Captain Warren had managed to procure good working impressions of two portions of the stone, amounting to about half the entire surface, while no one else had any but very bad ones—virtually illegible—I think the word, though inaccurate, was hardly too strong to designate his important part in the transaction.

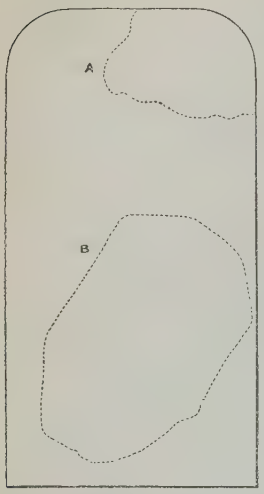
Your obedient servant,

GEORGE GROVE,
Hon. Sec. Palestine Fund.

Sydenham, March 23rd.

CAPTAIN WARREN'S FULLER ACCOUNT OF THE MOABITE STONE, RECEIVED MARCH 28, 1870.

11th March, 1870.



Rough diagram of the Stone, showing the two large fragments referred to in the letters. Reduced from Captain Warren's sketch.

The inscribed stone at Dhibân appears to have been first seen in the summer of 1868 by the Rev. F. Klein, of the Church Missionary Society, when on a journey from es-Salt to Kerak, over a country that has been visited this century but twice or thrice by Europeans.

A few weeks after Mr. Klein's visit, a man from Kerak came to tell me about a black stone covered with writing on the east side of the Dead Sea, and on making inquiries I learnt that Mr. Klein's party had drawn attention to it, and that the Prussian Consul was moving in the matter to get possession of it.

I did not feel at liberty to concern myself in the matter until the spring of 1869, when the Rev. Dr. Barclay related the circumstances of the case to M. Ganneau and myself, and we both expressed our surprise to hear that no squeeze or copy of the stone had been taken.

I wrote home and mentioned the circumstance to the secretary of the Palestine Exploration Fund, and also to a member of the Palestine Exploration Fund Committee at the British Museum, but by next mail I wrote to say that I heard that the Prussian Consul had obtained a firman for the stone, and that information on the subject must be obtained at Berlin before I could take any action in the matter.

In the meantime I had called on Mr. Klein, in company with Dr. Barclay, to ask about the stone, but could hear nothing more than I already knew, except that measures were still being taken to secure the stone.

I left Jerusalem in July, 1869, for the Lebanon, and did not return until November; on the road half-way up from Jaffa, an Adwân came to meet me, and after a good deal of talk told me that the stone at Dhibân was broken, and as a proof produced a piece of it, with letters on (squeeze forwarded 22nd December, 1869),* which he gave to me.

I saw him next day, and he told me that the French Consul (meaning M. Clermont-Ganneau) had sent down to get a squeeze but had failed, and that there had been a fight over it; he also said that the Governor of Nablûs, through the Modîr of es-Salt, had put pressure upon the Bedouins to obtain the stone, and that they, sooner than give it up, had put fire

* This letter must have miscarried, unless the date is in error for 22nd January, 1870, the date of the first letter forwarding a tracing which was received at the office.

under it and thrown water on it, and had so broken it up, but that there were still some pieces left.

On seeing that there really was a chance of the stone being lost to the world, I gave the man squeeze-paper and sent him off at once.

In a few days he appeared with a squeeze of a Nabatean inscription from Umm ar-Russas (copy sent home), which at first he said was from the Dhibân stone. I sent him down again after the real stone, and in the meantime M. Ganneau came, and told me that he had not quite failed in getting a squeeze of the whole stone, but that it was a most imperfect one, and in fragments. He afterwards showed it me, and I showed him and M. de Vogüé (who was then in Jerusalem) the broken piece in my possession, which was then the only piece which had been brought up.

On the 15th January (about) my Bedouin returned with two excellent squeezes of the two large fragments of the broken stone, and also with some small pieces, twelve in number, with a letter or two on each. I wrote and offered to M. Ganneau the use of my squeezes, in order to make his own imperfect squeeze of service. He came and took copies of them, and very kindly offered to give me a translation of them. This translation I forwarded home on 22nd January, with copies of the squeezes.

By a curious coincidence, M. Ganneau's Bedouin brought up squeezes of the two fragments the same morning as mine did ; but in each squeeze parts were more or less perfect than in the other. His squeezes appeared to be taken with my squeeze-paper.

I now sent my Bedouin down again, to get the smaller fragment of the stone, understanding that M. Ganneau was more interested in the larger one. However, my Bedouin says they bid against each other for the smaller stone, and as the other had taken down money with him to get the stone, he acquired it. My Bedouin came to say that if I gave him a higher sum he could get the stone still ; but I informed M. Ganneau of this, to put him on his guard, and sent my man after the larger fragment.

My Bedouin at this time brought me a very excellent squeeze of the larger fragment, which I showed to M. Ganneau, and sent a copy home 4th Feb., 1870.

As I had received no instructions from home about this stone here, I did not risk any money in sending it down, but offered a fixed sum if the stone should be delivered to me. Goblan has sent up to say that he is waiting till M. Ganneau's Bedouin has had his try at getting the larger fragment, and then if he fails he will step in and get the stone for me.

I may mention that on getting the first squeeze of the stone I called on the present Prussian consul and mentioned the circumstance to him, and also wrote to inform the late Prussian consul, who was interested in the matter, and is now at Berlin.

I have been particular in mentioning these points, because, from a letter which appeared in the *Times*, 10th February, it might appear that I had interfered in the matter while the Prussians were engaged in it, and I wish it to be clearly understood that I in no way meddled in the matter until I heard the stone was broken, and there was a chance of its being lost to the world.

Whether the stone got to Berlin, London, or Paris appeared to me to be a small matter compared with the rescuing of the inscription from oblivion, and it seemed to me essential that only one party should move in the matter at a time; when I came back from the Lebanon and heard that the Prussians and French had both failed, I thought it my time to move, and was unaware that M. Ganneau was still moving in the matter, until I had already sent down twice and got up a squeeze.

I consider that our success in getting up the squeezes and part of the stone without hindrance from each other is due to the *entente cordial* which existed between us; for if any jealousy had existed we might neither of us have done anything, and the inscription would have still been lost to the world; and I now with pleasure record my acknowledgment of M. Ganneau's honourable and upright conduct in this delicate matter so far as I have been concerned in it.

Extract from the "Times," Feb. 22, 1870, on the Count de Vogüé's Pamphlet.

The inscription is published by M. de Vogüé in the original Phœnician and in the Hebrew character, the language being so closely related to the Hebrew as to be scarcely distinguishable from it. M. de Vogüé is enthusiastic at the discovery, and thus writes on the subject:—"I venture to say that there does not exist in the domain of Hebrew antiquities a document which can be compared with it. It is the only authentic and original Biblical monument which has been found up to the present time. Indeed, according to M. Ganneau, the King Mesha is no other than the King of Moab whose bloody wars the Bible recounts, and who was contemporary with the Kings of Israel, Ahab, Ahaziah, and Jehoram. I entirely share that opinion; I even think that with the aid of the Biblical documents one may determine the year in which our inscription was made."

M. de Vogüé then refers to 2 Kings, chapters i. and iii.; to 2 Chronicles, chapter xx.; and to Josephus (*Ant. Jud.* ix., 2 and 3). He gives a sketch of the events, and adds:—"The only period of this tragic history in which the successful campaign mentioned on the pillar of Dibon can be placed appears to me to be that of the first revolt of Mesha. . . . Victorious at Yahatz and at Dibon, he erected the pillar as a monument of his victory; then, emboldened by success, he undertook against the King of Judah the campaign which was to have so gloomy an end."

"If my conjectures," he adds, "are well founded, the pillar was engraved in the second year of the reign of Ahaziah, King of Israel—that is, following the chronology generally adopted, the year 896 before the Christian era."

We subjoin the translation as given by M. de Vogüé:—

TRADUCTION.

1. Moi, je suis Mesa, fils de Chamos [nadab]? roi.....
2. ..... || Mon père régnait sur Moab.....et moi j'ai.....
3. régné après mon père || Et j'ai construit ce *haut lieu* (sanctuaire), avec sa plate-forme (?), pour Chamos.....
4. (Je m'apelle) *Mesa*, parce qu'il (Chamos) m'a sauvé de tous les.....a tous les deux (?).....
5. .....du roi d'Israel.....et il opprima Moab.....Chamos s'irrita.....
6. ..... || Et il le changea.....j'opprimerai (j'ai opprimé?) Moab. || Dans mes jours j'ai (*ou*: il a?) dit.....
7. et je le vis, lui et sa maison (son temple?). || Et Israël fut dispersé, dispersé pour toujours, et Omri s'empara de.....
8. Medeba (?) et y demeura.....il construisit quarante.....
9. où Chamos est (dominant) dans mes jours (aujourd'hui) || Et je construisis Baal-Meon et j'y sacrifiai || Et je construisis.....]
10. Qiriathaïm || Et.....envahit la terre.....anciennement; et se construisit
11. le roi d'Israël la (*ville de*)..... || Et je combattis à Qir (*ou*: je fis le siége) et je le pris || Et je tuai tous les.....

12. .....(*sacrifice ?*) pour Chamos et pour Moab || .....
13. .....devant la face de Chamos, ä Qerioth, || Et j'y fis prisonniers les hommes (vieux ?) et les.....
14. de la jeunesse (aurore) || Et Chamos me dit : Va ! prends la domination sur Israël. ||
15. J'allai de nuit, et je combattis avec lui depuis le.....de l'aube, jusqu'ùà midi || et je....
16. .....tout entier.....
17. .....qui est pour Astar Chamos.....
18. .....Jahveh (Jehovah ?).....devant la face de Chamos || Et le roi d'Israël [vint à]
19. Yahas, et y demeura (jusqu'à ?) mon combat avec lui || Et Chamos le chassa de.....
20. Je pris de Moab deux cents hommes en tout || Et je les fit monter (les comptai)à Yahas, et je.....
21. .....sur Dibon || . C'est moi qui ai construit l'esplanade (?), les murs de Yearim (?) et les murs de.....
22. .....Et c'est moi qui ai construit ses portes, et c'est moi qui ai construit sa forteresse || Et c'est
23. moi qui ai construit Bet-Moloch || Et c'est moi qui ai fait les deux.....
24. .....Qir || Et il n'y avait pas de puits dans l'intérieur de Qir, sur son esplanade. Et je dis à tout le peuple : Fasse
25. chaque homme un puits dans sa maison || C'est moi qui ai offert l'holocauste, sur l'esplanade (?) dans.....
26. .....Israël. || C'est moi qui ai construit Aroër (?), et c'est moi qui ai fait la route de l'Arnon.
27. C'est moi qui ai construit Bet-Bamoth, qui était détruite (?) || C'est moi qui ai construit Bosor, qui.....
28. .....Dibon, des chefs militaires, pour que tout Dibon fût soumis || Et moi j'ai.....
29. .....avec les villes que j'ai ajoutées à la terre || Et c'est moi qui ai construit.....
30. .....Bet-Diblathaim || Et Bet Baal-Meon, et j'ai érigé là le.....
31. .....la terre || Et Horonaïm, où résida.....
32. .....Chamos me dit : Combats à Horonaïm || Et je.....
33. .....Chamos.....sur.....
34. .....

THE TEMPLES OF CŒLE-SYRIA.

BY CAPTAIN WARREN, R.E.

Cœle-Syria, consisting of the fruitful Bukâ'a, closed in by the water-producing hills of the Lebanons, has from remote ages flourished and abounded in cities.

The rich plain, in peaceful times, would support an immense population, which, in time of war, has only to retire to the mountain fastnesses to be secure against attack, and where the soil is sufficiently productive to support it; it is, however, apparent that the country owes its chief wealth to the fertile plain below, which in the season is one unbroken expanse of corn as far as the eye can reach.

In early times, there can be little doubt that the summits of the hills were the more important places of worship, and temples may have been erected on them; but the temples, the remains of which now exist, appear to have been essentially temples of the plain. It is true, Saint Jerome tells us that in his time there was a remarkable temple on the summit of Mount Hermon, in which the heathen from the region of Panias and Lebanon met for worship. But it does not follow from this that they were the same people who worshipped in the temples down below. Probably at that time, as now, there were several religious sects in the country; some, perhaps, following the old sun worship, others the worship of the celestial gods, others that of heroes, and, probably, many adopting a mixture of all.

We have now in the country several distinct sects of Christians, two distinct sects of Moslems, and also two sects of which very little is known;

of one of these latter, Benjamin of Tudela (A.D. 1165) speaks ("Early Travels in Palestine," p. 51), and it does not appear impossible that this sect should have been descendants of the original inhabitants, who may have preferred the secret worship introduced (?) by the emissary of the mad khâlif, Hâkim (A.D. 1120), to the open religion of their Moslem rulers.

That the older forms of sun-worship existed side by side with the not less idolatrous worship that sprung from it there can be no doubt. Even as late as the time of the prophet Ezekiel we have a record of it, Ezekiel viii. 16—". . . . and, behold, at the door of the temple of the Lord, between the porch and the altar, were about five and twenty men, with their backs towards the temple of the Lord, and their faces toward the east; and they worshipped the sun toward the east." So that Hermon and other peaks of the Lebanons may, until very late times, have been places of worship; but the very text just quoted goes against the existing temples about Hermon having been used for the earlier form of sun-worship, for many of them are so placed that the sun cannot be seen until an hour or two after it has risen, and there does not seem any necessity in this form of worship for there to have been a temple at all, though the sun-worshippers in Egypt appear to have used them. See bas relief at Tell al Amarna (Fergusson's "Architecture," p. 122). Dr. Potter (vol i., p. 219) says that the Persians had no temples, even in ages when temples were common in all other countries, and that they sacrificed *upon some high place*.

It has been surmised by Dr. Robinson and several writers that the temples about Hermon were turned towards it as to a kibleh, so that the worshippers might face it when they prayed. The directions of these temples have now been taken, and also the angle from them towards Hermon, and it is found that they all have their *entrances*, more or less, towards the *east*, and in no case does the entrance, or any side of the building, face direct upon the summit of Hermon.

And there appears to be no reason, at first sight, for supposing that the directions of these temples are governed by any rules but those applicable to the late temples of Baalbec, Jerash, Palmyra, and the Hauran.

The question of the orientation of heathen temples is one of very great interest. I have not had access to any works specially treating on the subject, and therefore submit the following remarks with great diffidence, under the impression that the problem may have already been worked out. The silence, or reticence, however, of the books I have consulted, is so very striking that I make it a reason for bringing forward ideas on the subject.

The Egyptian temples of the eighteenth and nineteenth dynasties (attributed to the time of the Exodus) are said (Fergusson's "History of Architecture," p. 103) to face in all directions.

There would, probably, have been then, as now, few existing remains of the works of the sun-worshippers in the country.

The Israelites would then have had no especial kibleh arising from their contact with the Egyptians, beyond, perhaps, the double sentiment with regard to the East, viz., an inclination towards it as the point from whence God's presence should come, and a repulsion from it as the kibleh to which the sun-worshippers turned.

On the arrival of the wanderers under Mount Sinai, divine revelation planned out the tabernacle, not only with regard to its proportions and furniture, but also as to its position. It was to lie east and west, the entrance towards the east. The reason for this "orientation" is not given any more than it is given for the particular services that were to be performed, but reason there must have been. Josephus ("Ant." iii. 6, 3) quietly tells, "As to the tabernacle . . . . , with its front to the east, that, when the sun arose, it might send its first rays upon it." This reason, however, he rather spoils in "Ant." iii. 8, 5, when he says —"The sky was clear, but there was a mist over the tabernacle only, encompassing it, but not with such a very deep and thick cloud as is seen in the winter season, nor yet in so thin a one as men might be able to discern anything through it." In the sacred narrative we read (Exod. xl. 34)—"Then a cloud covered the tent of the congregation, and the glory of the Lord filled the tabernacle . . . . For the cloud of the Lord was upon the tabernacle by day, and fire was on it by night." This would appear to be sufficient to prove that the tabernacle had not its entrance to the east merely in order to receive the sun's rays, for it seems probable that the sun's beams only played upon the exterior of the cloud, and would never have shone on the tabernacle itself. Nor, when we consider the matter, does it seem probable that the reason given by Josephus would have been held good by the Israelites at the time of the first erection of the tabernacle; for they can hardly have given any special consideration to the sun when such extraordinary manifestations had been going on on Sinai; when they saw that the face of Moses shone with the reflection of the "glory of the Lord," that a miraculous cloud descended upon the tent, and that "fire came out from before the Lord, and consumed upon the altar the burnt offering . . . . "

Far more reasonable is the idea of some of the Jews of the present day, who say that the entrance of the tabernacle was towards the east, in order that the priest might watch for the first dawn of day in offering up the morning sacrifice. This reason would hardly, however, have held good if the tabernacle had been first placed on the west side of Mount Sinai, as then the first dawn would not have been visible towards the east. It hardly appears as if the sun would have anything to do with the position of the tabernacle, considering that the sun in one way or another was a great object of idolatry among the surrounding people.

In the construction of the Temple of Solomon we have again no reason given for the placing of the entrance to the east; but in the book of the prophet Ezekiel, xliii. 2, we have "And, behold, the glory

of the God of Israel came from the way of the east;" and, again, we have Matt. xxiv. 27, "For as the lightning cometh out of the east, and shineth even to the west; so shall all the coming of the Son of man be." Now this may perhaps explain it all.

The ancients may have originally turned towards the east to worship the "glory of the Lord," and have gradually learnt to look upon the sun as a symbol of that glory.

In the erection of the tabernacle the pure worship of God was restored to the general community; but the old kibleh of the east would not do, because it had already become the means of a gross idolatry, so the tabernacle was built to contain the glory of the Lord, its entrance facing the east, from whence the glory came; and thus the Israelites were brought to face in an opposite direction to the sun-worshippers, while at the same time they actually did face towards the same glory to which they had turned in the east previous to the setting up of the tabernacle.

Now, although the "glory of the Lord" filled the tabernacle, and after it the house of the Lord in the first Temple, and though the Lord dwelt there (Exod. xxix. 45; 1 Kings viii. 12), yet it appears that the Israelites did not pray to the Lord in the house, but turned towards the house and prayed to him in heaven. See Deut. xxvi. 15, where Moses tells the people to pray, "Look down from thy holy habitation, from heaven, and bless thy people Israel."

See, again, also how Solomon prays at the dedication of the temple, immediately after the glory of the Lord had filled the house, 1 Kings viii. 12. Then spake Solomon, The Lord said that he would dwell in the thick darkness. 13. I have surely built thee an house to dwell in, a settled place for thee to abide in for ever. 22. And Solomon stood before the altar of the Lord in the presence of all the congregation of Israel, and spread forth his hands toward heaven. 23. And he said . . . . 27. But will God, indeed, dwell on the earth? Behold, the heaven and heaven of heavens cannot contain thee; how much less this house that I have builded? 30. And hearken then to the supplication of thy servant, and of thy servant Israel, when they shall pray toward this place; and hear thou in heaven thy dwelling place: and when thou hearest forgive.

Dr. Potter, in his "Greek Antiquities," vol. i., p. 284, shows us that a precisely similar custom obtained among the heathen long after the statues of the gods had ceased to be regarded as mere symbols of the deities above and below. "We do all lift up our hands to heaven when we pray, saith Aristotle," and again in Horace.

"Cœlo supinas si tuleris manus."

Again, Burckhardt ("Travels in Arabia," vol. i., p. 175) tells us that at the hill Szafa, "with his face turned towards the mosque (the kaaba), which is hidden from view by intervening houses, the pilgrim *raises his hands towards heaven,* addresses a short prayer to the Deity," &c.; he

then goes on to inform us (page 177) that the hill Szafa, prior to Mahomet's time, was esteemed by the old Arabians a holy place, containing the image of the god Motam.

We find also the heathen of the ages after King Solomon with many other customs in their services similar to those of the Jews; and from the existing remains of their temples in Syria, Greece, Italy, and Sicily we find that they had for the most part also the entrances of their temples to the east, so that they must have worshipped towards the *west* also as did the Jews.

Now the ancient historians, and the commentators on them, on the contrary, agree in saying that the entrances of the ancient heathen were to the west, and that they worshipped towards the *east*.

Dr. Potter tells us "it was ancient custom among the heathens, to worship with their faces towards the east. This is affirmed by Clemens of Alexandria, and Hyginus, the freedman of Augustus Cæsar, to have been the most ancient situation of temples, and that the placing the front of temples towards the east was only a device of later ages."

Vitruvius (B.C. 25) also says that the entrance of temples should be towards the west, though in his time many temples must have already been built turned towards the east.

Dr. Potter again tells us "the Greek scholiast upon Pindar (B.C. 25) tells us, they were wont to turn their faces towards the east when they prayed to the gods, and to the west when to the heroes or demigods. Others say (Cœlius Rhod. lib. xii. cap. 2) they always kept their faces towards the sun."

Dr. Mosheim also, in his ecclesiastical history, says (vol. i., p. 57), "Before the coming of Christ all the eastern nations performed divine worship with their faces turned to that part of the heavens where the sun displays his rising beams. This custom was founded upon a general opinion, that God, whose essence they looked upon to be light, and whom they considered to be circumscribed within certain limits, dwelt in that part of the firmament from whence he sends forth the sun."

There is then either a conflict between the testimony given by the historians and by the existing remains of temples, or else we must suppose that at a certain time the ancient custom of having the entrances of temples turned to the west was changed to having them towards the east.

Now, of the more important temples that are known to have existed in Europe, the earliest date assigned to any of them does not appear to be more than B.C. 600; and of these, two at least of the oldest, the Parthenon and that of Jupiter Olympus, at Athens, are said (Stewart's "Antiquities of Athens," pp. 52 and 107) to have had their principal entrances to the west. In Syria (where the temples, as they exist at present, do not appear to be earlier than B.C. 100, and to range up to A.D. 300), the entrances, as far as I know, are in all cases to the east.

It would, then, appear that we have no cases of any temples with

their entrances to the east earlier than B.C. 600—that is, about four hundred years after the construction of Solomon's temple, and eight (?) hundred after the setting up of the tabernacle.

In other words, it would appear that at the setting up of the tabernacle the Israelites had commenced to turn when worshipping in a direction contrary to that of the sun-worshippers, and continued so; and that the heathen at least eight (?) hundred years afterwards, or not earlier than the destruction of Solomon's temple, changed their custom also, and turned as did the Jews.

Now, finding that the positions of the temples in Cœle-Syria are similar to that of the temple of Jerusalem, we turn to the remains of the Jewish synagogues in Galilee, and find that their entrances, with one exception (see paper of Captain Wilson, R.N., No. II. *Quarterly Statement*), face the south. This is more particularly interesting because the architecture of these synagogues seems to have grown out of that of the temples immediately to their north, about Hermon.

At first sight, it appears as if it would be natural to suppose that the chancel of synagogues should be towards Jerusalem, and the doors on the opposite side; so that the people should not turn their backs on their kibleh when entering. But there is another way of looking at the matter, viz., by continuing the principle on which the temple was built to the synagogues also: the temple with its door fronting the east, from which the glory of the Lord proceeded; the synagogues with their doors fronting towards the temple, in which the glory of the Lord resided or used to reside. There also may be another reason for the entrances being towards Jerusalem, namely, in order that there should be as little obstruction as possible between the worshippers and their kibleh. Thus we find Daniel (Dan. vi. 10) prayed, "his windows being open in his chamber towards Jerusalem;" and we find the same idea running through the eastern mind in a legend given, I think, in Burton's "Travels in Arabia," where Mahomet, either at Kuba or at the Kibleytein, being uncertain of the true direction of Mecca, suddenly saw his holy city, though so many miles off, and in spite of the many obstacles otherwise intercepting his view.

I understand from Mr. Church that near Beersheba there are the remains of a synagogue similar to those in Galilee. If it were found that this also has its door facing Jerusalem, it would cast more certainty about the matter; for at present all the known remains of synagogues are due north of Jerusalem.

In examining the authorities with regard to the direction in which the synagogues should face we find very conflicting evidence.

Vitringa and Buetorf make Jerusalem the kibleh, so that worshippers when they entered and when they prayed looked towards it. Clemens of Alexandria makes the east the kibleh; and Dr. Lightfoot, quoting from the Talmud, tells us that the chancel, corresponding to the holy of holies, was towards the west, the people facing that way. Probably Clemens of Alexandria only referred to European and African

synagogues, and thus so far agrees with Vitringa and Buetorf; but we have still left two systems, the one in which the chancel is towards Jerusalem, and the other in which the chancel is to the west; and to complicate the matter still further, we have the *existing remains* of synagogues with their entrances towards Jerusalem, and therefore apparently their chancels away from it. The Jews in Jerusalem state that at the present day they face towards Jerusalem when they pray, wherever they may be. Some Moorish Jews also told Dr. Chaplin, that during certain prayers they faced both north and south also; but they were not quite clear in what they said.

To return to the temples of Cœle-Syria. That these temples should not be immediately in the plain there is good reason.

In the first place, we find generally around them the remains of cities or villages, which implies that the temples were built for the worship of their occupants, and the towns again are placed a little off the plain, on the spurs of the hills—near the plain, so that the husbandmen should not be far from the scene of their daily labour; in the hills, so that they might easily defend themselves from the attack of an enemy. The plain itself also is in a great measure unfit for the erection of permanent cities, as it is for the most part a swamp during the rains. The name *Haush* (herd-fold) so often used as a prefix to the names of the small towns at present in the plain, of itself points to the temporary nature of these places; for example, Haush Hâla, Haush el Ghanîn, Haush tel Sefeih.

On looking at the map it will be seen that the large towns of the present day are all just out of the plain, under the hills. Baalbec, Zahleh, Kubb Elyas, Rasheiya, Hasbeiya, and Jub Jenîn.

Now with regard to a prevalent idea that the existing remains of temples cling more particularly around Mount Hermon. It is only necessary to look at the enclosed trace, on which all the known sites are marked, to see that Hermon is not the site of a great preponderance of temples; and when we hear what Gibbon has to say on the matter, it does not appear singular that the village temples around Mount Hermon should still exist, while all but the very large ones in other parts of the plain have disappeared.

Gibbon, p. 465:—"In Syria (about A.D. 381) the divine and excellent Marcellus . . . . resolved to level with the ground the stately temples within the diocese of Apamea . . . . and he successively attacked the villages and country temples of the diocese. . . . . A small number of temples was protected by the fears, the venality, the taste or the prudence of the civil and ecclesiastical governors."

I do not know how far the diocese of Apamea extended, probably not so far south as Baalbec; but supposing that these Christians were able without difficulty to destroy the minor temples of the plain, they could certainly have been brought to a standstill at the gorge east of Jubb Jenin, where the plain to north-west of Hermon is connected with the great Bukâ'a. Thus we may account for the small village temples of Hermon

still existing; but it is also to be observed that there is another destroyer of temples who has been slowly working for centuries—the builder.

In the great plain it would have been easy enough to have carried off the cut stone of smaller temples to the new sites of churches and mosques; about Hermon the rugged nature of the country would prevent the stone being worth its carriage. We have thus, apparently, good reason for believing that the villages and towns about the plain had their small temples, as are found about Hermon, but that they have either been destroyed or devoted to other purposes.

Two temples only of those visited (besides Baalbec) bore decided marks of having been used as Christian churches, those of Rukleh and Burkush.

On the whole, then (apart from the architectural indications), there does not appear to be sufficient reason for supposing that these temples, remains of which now exist, had to do with the old worship of the country, but rather that they belonged to the towns and villages, and had to do with the worship of statues of the gods. They appear to have been placed in the most conspicuous parts of the towns, and probably varied in size and magnificence, according to the number and wealth of the population.

The inscriptions on these temples are mostly Greek. Copies, where possible, were taken, but generally only a few letters in each line were visible.

When we examine the architecture we find no trace of Assyrian or Egyptian ornamentation; the temples are very like Roman of a late date, but some of the littles ones about Hermon may be earlier.

At the temple at Damascus there are Egyptian mouldings on the capitals of the pilasters; at Rukleh there is a dark-coloured stone, with what appears to be an Assyrian eagle. With these exceptions (and also of Baalbec), the work appears to be of the time of the Seleucedæ and the Romans.

We are told by Dr. Mosheim that the heathen worship continued in Syria as late as A.D. 420, when the inhabitants summoned Simeon Stylite to help them from the ravages of wild beasts, and he counselled them to give up their idolatry; and Theodosius the younger made a law about the same time enjoining the destruction of all heathen temples in default of their being turned into Christian churches.

We have, then, nearly five hundred years under the Romans, in which these temples may have been built.

There is one peculiarity about some of these temples which appears to distinguish them from those of Europe. They are mounted on stylobates, and have no steps or staircase up to the entrance, and the only method of entering is by a small door opening from the side of the stylobate into the vaults underneath, and thence by some means into the temple itself; from this it would appear either that only the priests went into the temple, or else that there was some temporary wooden staircase up into the stylobate.

The small temples about Hermon appear to be somewhat of more ancient date than those in the Bukâ'a; they are of the Ionic order, and are *in antis*; they in some cases differ from the pure Grecian style in having similar designs on the square capitals of the *antæ* to what there are on those of the columns. The friezes also bulge in all; there are no dentals on the cornice nor ornaments on the frieze; the *antæ* diminish in width from bottom to top.

A description will now be given in detail of these temples, and afterwards an account of the tour in the mountains.

THELTHATHA (ALSO CALLED NEBY SUFA).

References.—"Robinson's Later Researches," p. 426; "Land of Israel," p. 601; "Murray's Handbook," p. 537. There is also an excellent lithograph of the temple from one of Van de Velde's sketches.

A small village lying on the east side of the range separating the Hâsbâny from the Litâny. A few feet above the village is the site of the temple, whence can be seen a great portion of the Hermon range.

The temple lies east and west, the entrance towards the east; the side bears due east (90°) by the compass, and a bearing to summit of Hermon gives 136°. Height above mean sea level, 3,780ft.

The temple is *in antis*, and measures (see Plate) in length 72ft. 7in., and in breadth 35ft. 1in., including the projections of the antæ. Height from cornice to platform of stylobate 34ft. 4·75in. The pronaos is 14ft. 4in. by 30ft., the cella is about 48ft. by 23ft. 9in., but the transverse wall between the pronaos and cella cannot readily be distinguished on its inner side. The cella is raised at its western end six feet above the floor of the temple. This raised portion extends from western wall towards the east for about nineteen feet, and below it are chambers.

These chambers may have been used as store-rooms; they are furnished with niches, and one of them also appears to have acted as a passage to allow the priests to enter the temple secretly (*vide* "Bel and the Dragon"). For this purpose there is a door on the south side of the temple in the stylobate at 7ft. 7in. from the western end: this opens through a wall 3ft. 9in. thick, into a chamber 22ft. 7in. long and 9ft. wide. At the end of this chamber to the north is a staircase (now walled up) leading to the raised platform above: the side wall of the temple to east is then increased by three feet to allow of the stairs. The side walls of the temple in other places are in thickness 5ft. 7in.

In the centre of the west wall of this chamber is a window, formed like a loop-hole, 10in. wide outside and 2ft. 3in. within. On either side of this window are two niches 1ft. 10in. wide, 2ft. 6in. high, and 1ft. 10in. deep. Opposite to them on the east side of the chamber are two similar niches, and between them and opposite to the window is an opening in the wall, leading into a chamber 8ft. 10in. by 5ft. 1in. From this on either side to north and south are other two chambers, 6ft. 2in. by 5ft. 6in.; in these latter are other niches. These small chambers

TEMPLE OF THELTHATHA (ثلثاثة) CALLED ALSO NEBY SŪFA. SCALE 1/350

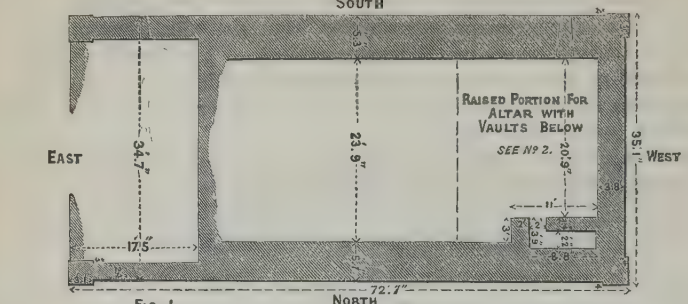


FIG. 1. PLAN.

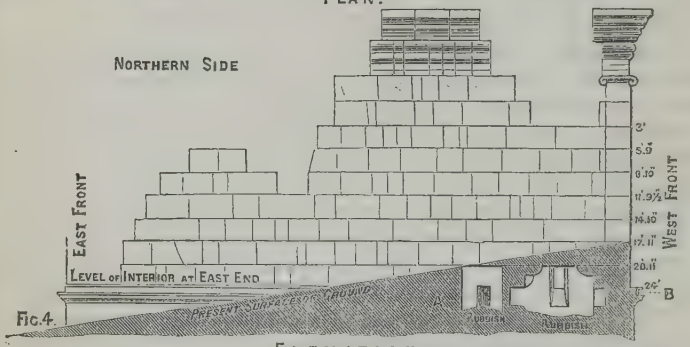
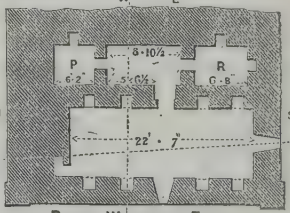
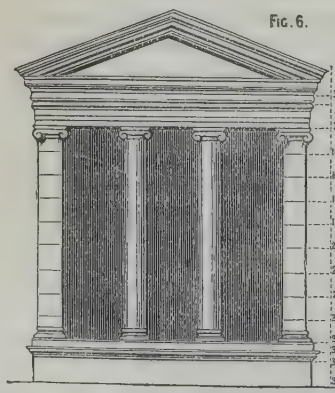


FIG. 4. ELEVATION.



PLAN WESTERN END. FIG. 2.

FIG. 6.



EAST FRONT 1/350

CORBELS IN VAULT.

SCALE 1/30

FIG. 5

FIG. 3. ELEVATION.

(P. Q. R., Fig. 2) are covered over by great flat slabs. The silt or mud lies deep in these chambers, so that their height is uncertain; but it is probably not less than 7ft. In the first and larger chamber, where the width is 9ft., corbels are used for supporting the flat slabs for the roof. (Fig. 3, 4, and 5.) There is first a corbel 1ft. 9½in. high, and 1ft. 4½in. projecting out, and above it a smaller corbel 1ft. 2in. high, and projecting altogether 2ft. 2½in. from the side of the chamber, so that the space to be spanned by the slabs is only 4ft. 7in. wide. These slabs are probably not less than 9ft. long; they vary in width from 4ft. to 5ft., and are perhaps 2ft. 6in. to 3ft. in thickness. This description of these chambers is here given with some minuteness, because in most of the temples met with the arch is used instead of corbels and flat slabs.

The temple is of the Ionic order (see restoration, Fig. 5). The antæ are 3ft. 1in. square near base, and diminish to 2ft. 10in. near capital; they project at base 4in. beyond the pteromata; the bases are Attic; the capitals have two of their faces together uniform as in the Roman samples, there being volutes at three of the angles; but at the fourth angle the volute has been hollowed out, so as to form a sort of handle in appearance. There are nine courses between the entablature and stylobate, measuring exactly 27ft. in height, and the courses themselves are individually each about 3ft. in height. (Fig. 6.)

Robinson says there are thirteen courses of stone; perhaps he included the stylobate. I only found nine courses. The entablature is in height 7ft. 4·75in.; the architrave and frieze are in one piece, measuring 4ft. 4·5in.; of this the frieze measures 16·5in., and is cushioned. Nothing whatever could be found of "the figures of a ram's head and bull's head alternately" on the frieze described in "The Land of Israel," though nearly every stone lying near the temple was examined; but, on leaving, stones were seen lower down the hill, and perhaps they may have been on some of these. It does not, however, appear probable that the heads were on the frieze, more likely at intervals on the cornice; nothing, however, was seen of any heads on the cornice. The upper mouldings of the architrave are somewhat peculiar; the angle at the base of the pediment is about 21° 30′.

The temple stands on a stylobate which projects very slightly beyond the wall of the temple; to this there are two cornices, but no base visible. It is in height altogether 5ft. 6in., and appears to have run right round the building, so as to have admitted of no steps in front (see restoration, Fig 6), and as the height is too great to have allowed of the people stepping on to it, it does not appear probable that it was entered by the vulgar.

No capitals or bases of columns could be found. Several portions of the shafts were found lying about, which measured 2ft. 1in. in diameter.

There are no signs of any bevels (in the Jerusalem nomenclature) on the stones, but they are each well squared, and have a chamber one quarter of an inch round their edges. They are of the ordinary blue

limestone; this obtains by exposure a very blue colour, which gives to the country such a cold appearance.

Fig. 3. gives the north side of the temple as it stands at present. The joints of the stones are inserted correctly as far as fifty feet from the west end; beyond that they are sketched in roughly. On one stone the joint is at an angle, instead of being vertical; as this was found to be the case also about the same place on the north side of the temple at Ain Hersha, notice is here made of it.

The stones vary from 3ft. to 7ft. in length. No signs of any inscriptions were seen.

The temple has very little remaining *in situ* except on the northern side, and a good deal appears to have fallen in the last ten years. The men at the village said they had tumbled over a great portion lately. Only a few hours could be devoted to this ruin, time quite insufficient for measuring the details of the mouldings with extreme accuracy.

HIBBARIYEH.

References.—Burckhardt, p. 35; "Robinson's Later Researches," p. 417; "Land and the Book," p. 350; "Murray's Handbook," p. 427.

Burckhardt describes the ruin of a temple at Hereibe, which is evidently the same as is now called Hibbârîyeh.

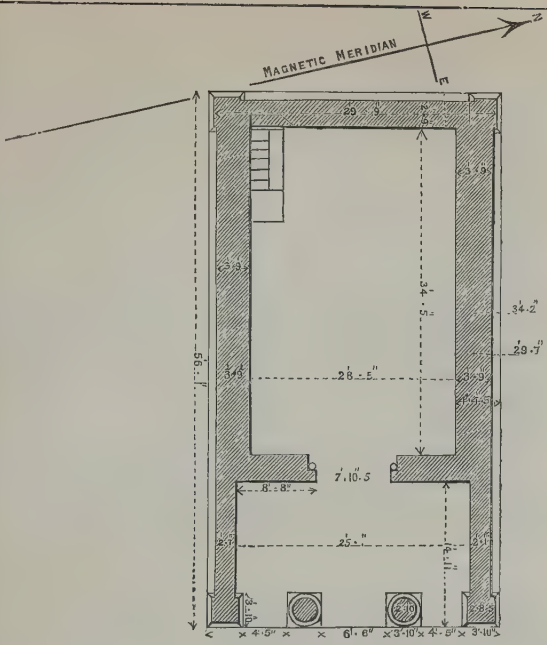
Hibbârîyeh is a village to S.E. of Hasbaiya by about one hour and twenty minutes' walk; it is on nearly the same level, viz., 2,270 feet above mean sea level.

Situated on a spur of a hill on the western side of the great Wady Shiba, the view to the west and south is exceedingly fine; but to the east Hermon cannot be seen.

The temple lies to the west, and below the village, in a field; its entrance is towards the east, the magnetic bearing of the side being 101°; and, as the summit of Hermon bears considerably to the north of east, the line of the temple cannot be in the direction of the summit.

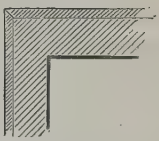
The temple is *in antis*, and measures (see plate) fifty-five feet in length and 29ft. 9in. in breadth, including the projections of the antæ: height from cornice to platform of stylobate, 26ft. 8in.

The pronaos is 11ft. by 25ft; the cella 34ft. 5in. by 21ft. 9in. The side walls of pronaos are 2ft. 1in. thick; of the cella, 3ft. 9in. thick; and the wall at west end, 2ft. 9in. thick. The east wall of the cella is 2ft. 10in. thick. The interior is very much filled up with the fallen stones, so that it cannot be seen whether the west end of the cella is raised above the rest. At the south-west corner of the cella is a little staircase leading up into the building through the western wall. The temple is of the Ionic order (see restoration in plate); the antæ are 2ft. 8½in. square at the base, but it was not observed whether they diminish towards the top in width. They project near base about four inches beyond the pteromata; the bases are Attic, except that the

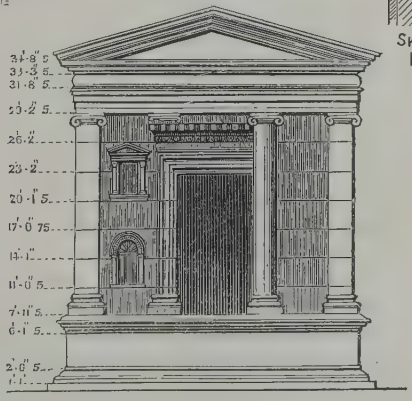


PLAN OF THE TEMPLE OF HIBBARIYEH.
SCALE. 20 FEET TO ONE INCH. $\frac{1}{240}$

VOLUTES ON ANTAE.



SKETCH OF SAMPLE OF BEVELLED STONES.



RESTORED ELEVATION OF THE EAST FRONT OF THE TEMPLE. $\frac{1}{240}$

skotia is not hollowed out. The faces of the capitals on each side are uniform. The columns are 2ft. 10in. in diameter near base; the bases are Attic.]

There are seven courses between the entablature and stylobate, measuring in all 21ft. 3in.; each course is nearly three feet in height.

The entablature is 5ft. 6in. in height, exclusive of the cyma of the cornice, which has not been measured. The architrave is 2ft. 6in. high, and the frieze 1ft. 7in. They are in separate pieces. The frieze is cushioned, and bulges about 3·5in.

No heads were seen on the cornice. The courses are bevelled; there is first a chamber round the edges of the stone, angle 45°, then a sunken marginal draft of six inches, dressed with a chisel: the face of the stone projects two-tenths of an inch. There is no second chisel-cut draft round the face (as at Jerusalem), and it is roughly dressed with a point. The stones forming the antæ are not bevelled.

The entrance doorway into cella is 7ft. 10½in. wide. Within the jambs on either side are sockets cut in the pavement for the door hinges. There are mouldings round the jambs and lintel, and above is a cushioned frieze and very ornamental cornice. The lintel is in three pieces, forming a flat arch, of radius 5ft. 8in.; height of doorway in clear, 15ft. 2·5in.

Burckhardt says the doorway "has no decoration whatever."

On either side of the doorway are two niches, an upper and a lower.

The lower niche occupies the second and third courses from the pavement, is 23in. wide and 16in. deep, being on plan semi-elliptical. It has pilasters on either side, in proportion, to support an arch. The top of the niche inside is cut out in form of a shell.

The upper niche is 25in. wide, and is cut in square to a depth of 14·5in.; it is 3ft. 8·5in. high in the clear, and has a flat top: on either side are columns supporting a pediment, the entablature of which is similar to that of the temple itself, but the capitals of the columns are a kind of Corinthian. This niche occupies the 5in. and 6in. courses, and on the 4ft. course on the southern side of the doorway is a Greek inscription. The letters which remain are very sharply defined, but the greater portion is lost by the flaking away of the stone.

The temple stands on a stylobate, which projects very slightly beyond it; the width of one being 29ft. 9in., and of the other 30ft. 11in. It is eight feet high from top of cornice to bottom of base, and runs right round the building; so that there are no means of getting up to the entrance except by going into the stylobate at northern or western sides, where there are small entrances, one 4ft. 6in. wide and 5ft. high, the other only about two feet wide. These entrances probably lead into the "spacious vaults" described by Burckhardt, and thence up on to the platform of the temple at the *western* end of the cella; so that they were probably entrances for the priests.

Running round the inside of the building, pronaos, and cella, is an architrave on the same course and similar to that outside.

The doorway is the same width from top to bottom. The stone of the building is the ordinary blue limestone of the country. There are cut on the cornice stones places for seven joists, 1ft. 11in. in width and 14in. deep. The capitals of antæ could not be reached for measurement; the capitals of columns have disappeared.

AIHA.

Reference.—"Robinson's Later Researches," p. 431.

Aiha is a village thirty minutes from Rashaiya, on the road to Damascus; height about 3,750 feet above mean sea level.

The temple stands to the north of the village on the brow of the hill overlooking a small lake which dries up in summer-time. Nothing is now visible of the temple excepting the western end and part of the stylobate. The entrance apparently was towards the east. The bearing of the side of the temple is 78° 30′, while that of the summit of Hermon is 195°, and the summit of Jebel Sunnin 353°.

A portion of one of the antæ of porticum is *in situ;* its base is Attic, and stands on a socle 18in. high. The four courses above the stylobate measure 18in., 2ft. 3in., 2ft. 4in., and 2ft. 3in. The stylobate is 5ft. 8in. in height; it has a cornice and base similar to those of the Roman examples of the Corinthian order. The breadth of stylobate is 29ft. 4in. It projects 10·2in. beyond the antæ. So that the breadth of the temple, including the projection of the antæ, would have been 37ft. 8in.

Houses are built over the site of the temple, and in one place the stylobate can be traced for 47ft. 2in., where it is now used as a stable. An entrance through this leads into vaulted chambers full of grain, and here we were not allowed to remain for fear of setting the place on fire.

Lying about near the temple is what appears to be a Corinthian frieze.

There are also bits of architrave and other mouldings about Figs. 4, 5, and 6. A column lying near measures 3ft. 3in. in diameter.

A stone with a Greek inscription is built into the west wall. Stone, blue limestone.

DEIR EL ASHAYIR.

References.—"Robinson's Later Biblical Researches," p. 437; "Land and the Book," p. 350; "Murray's Guide," p. 433.

A village situate on the north of the Hermon range, on one of the roads leading past Rashaiya to Damascus. It is surrounded by low hills, and overlooks to the east a small plain, at the farther end of which is a sheet of water. The temple stands in a conspicuous part of the village; the prospect from it to east is very fine, though limited in

extent, and the situation is well adapted to the assemblage of large multitudes and the performance of religious ceremonies. The estimated height of temple above mean sea level is 4,050 feet.

The temple is of the Ionic order, its style probably *in antis*. The entrance faces nearly due east, the magnetic bearing of the side being 94°.

The length, including the projections of the antæ, is 88ft. 3in.; the breadth, 39ft. 8in.

It is divided into two parts—the pronaos, 11ft. 7in. by 32ft. 5in.; and the cella, 46ft. 8in. by 32ft. 5in. At the western end of the cella is a raised platform, 8ft. 3in. above the pavement of the temple. This platform is supported by vaults, to which there are three entrances from the cella. The platform is 22ft. 4in. by 32ft. 5in.

On the inside of the pteromata are pilasters, projecting 4·5in., and 3ft. 1in. wide; they are 5ft. 10in. apart. Their bases rest upon a cornice running round the cella, the top of it on a level with the floor line of the raised platform. Small Corinthian capitals were lying about the cella, and appear to have surmounted these pilasters. The bases of the pilasters are Attic. The antæ are 4ft. 3in. wide at bottom, and diminish up to 3ft. 10in. They measure in height about 38ft., including capital and base. There are in this thirteen courses, averaging each 3ft. in height. The entrance doorway runs up to the top of the seventh course, and is about 21ft. high in the clear, and 11ft. 10in. wide.

One of the antæ to S.E. still remains *in situ*, and part of the wall of the building all round; but every bit that has fallen has been carried away, except the capitals of the antæ, and no appearance of the entablature could be found anywhere about. The columns, also, and bases are gone; but it is likely that the temple was *in antis*, and not prostyle.

The temple is mounted on a very handsome stylobate, with cornice and base mouldings, somewhat different to the ordinary Roman type; and running round the cornice is a blocking 3ft. high, forming a parapet to the platform round the temple. This space is 9ft. wide at the sides and rear, and 21ft. in front. The stylobate is 11ft. high, and stands on a plinth 6ft. high at one point; but probably this latter may not run all round at this height. To south and east houses, but on to the stylobate, so as almost to conceal it. The total height of temple, from cornice to stylobate, was probably about 45ft. to 46ft.

This temple also has the peculiar character of having no steps up to its platform, the stylobate running all round without a break. The stylobate has, probably, vaults in it, and there appeared to be an entrance to them from the east; but admittance could not be obtained. This is, possibly, the village granary. The method of entering the temple for the priests is, too, apparent; but, as at Thelthatha and others, it is likely they went in through the stylobate. No appearance of mortar or cement could be seen. The stone is of the mountain limestone obtained hard by, and assumes by exposure an extremely blue appearance. The stones are not bevelled. No inscriptions were found

about the temple, but a few feet to front is a pedestal lying on the ground, on which is a Greek inscription. A squeeze was made of this.

RUKLEH.

References.—"Burckhardt," p. 49; "Robinson's Later Researches," p. 437; "Land and the Book," p. 350; "Murray's Guide," p. 432.

Rukleh lies a little out of the road from Katana to Rashaiya, about three hours from the latter; it is in a nook in the hills. Height, about 4,780 feet above mean sea level.

There are here the remains of two temples about 150 yards apart; the upper one to the S.W. is a shapeless mass of ruins; but there are Greek inscriptions lying about. The lower temple to N.E. is that which has been described by Burckhardt and others. This temple, which was once a very handsome structure, is now very difficult to examine, because it has had an apse stuck on to the eastern end; and the architrave of the original entablature appears to have been used to form door-jambs for the west end of the altered building.

The impression I have is, that it originally was a temple with entrance to east, and afterwards turned into a church with entrance to west. This is a very important point, as it is probable that the finding of this temple with entrance to west, while temples west of Hermon have their entrances to east, may have first given rise to the idea of Hermon being the Kibleh of these temples. It is to be observed that the other temples near Rukleh—viz., Deir el Ashayir and Aiha—have their entrances to east, as have all other temples I have seen in the country on both sides of Jordan.

The temple lies S.E. or N.W.; the bearing of the side being 127°, while that of Hermon is 231°, so that one side (that on which are the head and eagle) faces towards Hermon within a few degrees; but this is probably mere accident, as I think the head occupied the tympanum of the west pediment in the original building, and would thus have faced in another direction.

The temple as it now stands is from 56 to 59ft. broad, and measures 82ft. 10in. from west end up to where the apse commences; but there are traces of the wall having continued further east by 18ft.

Little more than one course of the wall still remains above ground, and it seems doubtful if any of it is *in situ*, except the portion of the antæ at N.W. angle.

The *face* is well described by Robinson, and he suggests it may have been that of Baal; however that may be, it is not likely that it was originally in its present position, just where the cornice of the stylobate would have been.

The eagle was not seen by Robinson; it is described by Burckhardt. The stone on which it is sculptured is now broken in two, and lies over

at an angle so as to be very difficult to find. To me it appears to be of a type essentially Assyrian, and is of a blackish stone (not basalt), quite different to those of the building, and has probably been brought from a distance. A squeeze of a portion of the bird has been taken.

The building has two rows of columns running up the interior; there are three in each row, and they are equidistant from each other, and form the outside of the side walls; they are 19ft. apart from centre to centre; the lower diameter is about 2ft. 8in.

The capitals are Ionic, and are ornamented below the volutes in a manner similar to those at Deir el Ashayir.

The apse measures 22ft. 5in. across inside; it is 13ft. 10in. deep, and is nearly semicircular on plan; the walls are 2ft. 5in. thick.

Two columns of larger diameter than those already referred to are cut in for the resting of part of the wall of the apse, and this proves the apse to be of later construction. The diameter of these two columns is 3ft. 2in.

On the southern side wall there appears to have been a small door. On the northern side wall *débris* has accumulated. Perhaps if an excavation was here made, the stylobate might be uncovered.

Three of the door jambs are probably formed from the original architrave of the entablature; it appears to have been the lintel of a doorway. Two pieces of stone stand up in an odd, isolated manner a few feet in front of the entrances. They appear to have been part of the entablature. The antæ appear to have been 3ft. 6in. wide at west end; bases, Attic.

A restoration could probably be made of the original temple, if some little time was spent in examining the fragments. Close to the eagle there is a Greek inscription, of which a squeeze has been taken.

BURKUSH.

Reference.—"Burckhardt," p. 50.

It lies a little to the south of the road leading from Rashaiya to Katana, about four hours from the former; height above mean sea-level, 5,200 feet. It is on the extreme verge of the Hermon range to east, and looks down upon the great plain a thousand feet below it.

Ruins abound in the neighbourhood, but the principal object is a rocky ridge running N.E. to S.W. for about 300 yards. On the summit a plateau has been levelled, and at the S.W. end the requisite height is obtained by great substructions of heavy masonry.

The buildings here appear to be of different epochs. At the N.E. end is a small Roman looking building, which has had an apse added to it; at the S.W. end is a huge pile, forming a platform 120ft. by 159ft. 6in., on which a Byzantine building has been erected. Between the two, for 175ft., the foundations of out-buildings cover the ground.

The great platform will first be described. It measures 159ft. 6in.

from N.W. to S.E., and 120ft. from N.E. to S.W. Towards the north the rock cropped up above the level of the platform has been cut down, and where it could be done, the piers of the superstructure have been cut out of it. To the south, the rock falls very rapidly, until, at the southern end, it requires 40ft. of wall to bring the platform up to the equired height.

The principal substructure is a long chamber, running the length of the building, and 19ft. 5in. wide; over this a series of arches have been thrown at intervals of 4ft. 1in., each arch being 2ft. 1in. across; and the platform of the temple has been formed by throwing flat slabs across from arch to arch. These arches appear to have been semicircular on the outer side, where a thrust would have been dangerous; but on the inner side they are segmental. The skewbacks, however, on the outer side are made for segmental arches, so that two lines for the intrados are shown on the section. The walls here are 5ft. 5in. thick; the courses are generally 3ft. 7in. to 5ft. 8in., as in the Haram Wall of Jerusalem. There are other chambers, which have regular barrel vaults over them, and other and smaller chambers have corbels, and are roofed with great flat slabs, as at Thelthatha. These chambers appear to have been used as store-rooms, and one of them is a bath-room.

The wall at southern end is 40ft. in height; there are twelve courses, including the blocking course; the cornice is the cyma-recta, common to the buildings about this part of the country. Houses are built on the N.E. side of the building, and the vaults are used by the villagers. A great number of the stones in the building have the mason's marks on them, Greek letters. See Note on the subject.

The platform appears to have been occupied at a late date by a Byzantine Basilica; a great number of capitals are lying about, and all differing in style and shape; some of them are fantastic in their appearance. There are two rows of piers still standing; these are 9ft. by 4ft., and have engaged columns at their ends. They run in the direction of the length of the building. The two rows are 35ft. 6in. apart, and the piers in each row are 36ft. 6in. from centre to centre. These piers stand 16ft. 9in. high, exclusive of the capitals; there are seven courses, about 2ft. 6in. each; the bases are Attic, the skotia being filled up. One capital appears to be similar to those at the Golden Gate, Jerusalem. Lying down outside the building is an exceedingly handsome Ionic capital, of a much earlier period; a sketch is given, but the abacus is not drawn in. I am under the impression that there was a building on the platform previous to the erection of the Basilica. This place must have been of considerable importance in early Christian times, for the erection of such a large Basilica, and it would be interesting to discover whether Eusebius does not mention a large town near here.

The building, 175ft. north of the great platform, has its entrance towards the Basilica; it is 64ft. 9in. by 35ft. 4in. It seems doubtful whether it was a temple;—perhaps a hall for some secular business. It has, however, apparently been used afterwards as a church, as the apse

end has evidently been put in at a later period. The side walls are 3ft. 10in., the front wall 4ft. 9in.; the rear wall is in confusion. There are eight courses remaining, measuring 25ft. in all, and varying from 2ft. 8in. to 5ft. 6in. The door is 9ft. 10in. high, and 6ft. 6in. wide; on either side is a column on a pedestal, supporting a pediment; the capitals appear to be Corinthian. This building has nothing in common with any of the temples found about the Lebanon. The magnetic bearing to Rukleh from here is 349°.

ZEKWEH.

Reference.—"Robinson's Later Researches," page 494.

This village lies on the western side of the Bukâ'a, just up in the hills, about 100ft. above the plain, and 2,250ft. above mean sea level. The temple occupies the centre of the village, and, though small, is conspicuous for miles round. It is about two miles south of Megdel Anjar.

The temple lies N.E. and S.W., the entrance to the north-east; the magnetic bearing of the side is 59° 30′; it is now used as a house, the flat roof of which prevents the interior being seen much below the capital from the outside; the roof is gone, of course, but the side walls are intact, and also the entablature and pediment of the western end.

The temple prostyle measures in length 39ft. 10in., in breadth 23ft. 6in.; height, from cornice to base of antæ at bottom, 21ft. 9in. The portico is 6ft. 6in. wide from end of antæ to centre of columns; the pronaos is 7ft. 4in. by 19ft. 5in.; the prolongations of the side walls are 2ft. thick.

The cella is 19ft. 4in. by 28ft. 5in., the side walls are 2ft. 1in. thick, the west wall 1ft. 7in., and the east wall of cella 2ft. 4in. It cannot be seen from outside whether the west end of the cella was raised or not above the floor of the temple.

The temple is of the Corinthian order, but the leaves on the capitals have not been carved, beyond showing their bare outline. The antæ are 2ft. 0·25in. square; they hardly project beyond the wall of the temple, except at the capitals; it is doubtful whether they do project at all. The bases were not observed; for capitals, see Fig. 3 in tracing. The columns (monoliths) are 13ft. in height; the capitals are similar to those of the antæ; diameter of columns just below the capitals, 1ft. 9·5in.; the two middle columns stand 8ft. 6in. apart from centre to centre.

The architrave resting on the capitals is the same inside and out, and has mouldings underneath. There are seven courses in building between the entablature and floor of temple, measuring together 16ft. 9in., and individually being each about 2ft. 6in. in height; on the side walls, on the capital course, at 3ft. 6in. from the capitals of the antæ at west end, are ornaments. The stones are all stretchers in the wall, except just at the ends, and measure from 8 to 10ft. in length:

they form the thickness of the wall; bevels are partially cut on some stones. The stones are cut from the ordinary blue limestone. The entrance doorway, if still existing, could not be seen.

The entablature is about 5ft. in height, but it is not certain whether there was not an error in the measurements of the cornice, so the figures are left out.

The architrave and frieze are in one piece: the former is very plain, the latter is pulvinated, and projects about 2in.

On the cornice on either side are three lions' heads: one of them is only 2ft. from the west end.

The rise of the cornice of the pediment is 17½in. in 3ft. 2½in.

Within, on the west wall, on the capital course is some sculpture.

KUSUR NEBA.

Reference.—"Van de Velde's Plan."

This village lies on the eastern side of the Bukâ'a, about five miles north of Tahleh. It is elevated about 500 feet above the plain, and is about 3,600 feet above mean sea-level. The temple is situated on the southern side of the village. Only the stylobate and three courses remain *in situ*. It is partially occupied as a habitation.

The temple lies east and west; the entrance to the east. The magnetic bearing of side is 81°, while the bearing to Baalbec is 69° 30′.

The temple prostyle measures in length 90ft. 4in., and in breadth 46ft. The portico is 12ft. 8in. wide, from end of temple to end of plinth of column. The side walls are 4ft. 5in. thick. There are no antæ at west end. Only three courses now remain; these measure upwards 3ft. 2in., 4ft. 5in., and 3ft. 2·5in. They show that the side walls were broken by seven pilasters, including the antæ to east, projecting 4·5in., each about 5ft. wide, and about 7ft. apart.

These courses do not lie flush one over the other, but recede and project again, as at Husn Niha.

The plinths of the columns measure 5ft. 11in. square. The columns, perhaps, measure 3ft. in diameter, and were 12ft. 2in. apart from centre to centre at each side, leaving an opening in front of entrance of 16ft. from centre to centre. The bases were Attic, and cornice Corinthian.

The stylobate is 9ft. 10in. in height. It has a base and cornice, very plainly worked.

NIHA.

Reference.—"Land and the Book," p. 61.

Situated in a glen on the west side of the Bukâ'a, about four miles north of Tahleh, it is about 250ft. above the plain, and 3,300ft. above mean sea level.

The temple lies to the west of the village; the entrance is to the east but the bearing of the side was not booked; probably it bore some

degrees to north of east. There are a good many ruins about, and the temple itself is nearly completely destroyed.

It was probably very similar to that of Husn Niha. Very few measurements could be taken, on account of the lateness of the day when it was visited.

The temple was probably prostyle. Length, 122ft.; breadth, 57ft.; pronaos, 27ft. 7in. by 45ft. 6in.; the projections of the lateral walls being 6ft. 2in. thick. The cella, 81ft. by 48ft. 4in.; the lateral walls being 4ft. 4in. thick; the west wall, 3ft. 6in., and the east wall of cella, 9ft. 6in.

It will be seen that the west wall is very thin; this, probably, on account of the west end of temple running into the side of the hill. The thickness of the transverse wall between cella and pronaos was probably required for the purpose of winding staircases in wall, as at Husn Niha.

On each side of the cella are six engaged columns, about 4ft. in diameter, and at the corners to east, and possibly also to west, are double engaged columns, as at Husn Niha. Some of the courses in the wall measure 3ft. 11in., 5ft. 8in., 3ft. 8in., and 4ft. 3in. in height. They form the thickness of the wall, and a few of them are bevelled. Some large bevelled stones are lying about; but it is difficult to say whether they formed part of the temple.

The architrave is the same as at Husn Niha; also the capitals, except that the carving has proceeded further.

The temple was built on a stylobate, and probably had steps up to it, as at Husn Niha. All this is a confused mass of ruins. Altogether this temple appears to have been of the same style and size as that of Husn Niha; but the workmanship is of far better quality, and everything substantial and solid.

The lintel of the doorway has a very handsome hypertherum, and the course, on which are the base mouldings of the engaged columns inside, has also a moulding running round the outside.

On the face of one of the stones is the bust of a woman in relief—full size, well carved.

Nakleh: a village on east side of Bukâ'a, about five miles north of Baalbec.

Only the stylobate and two courses remain at east end. Temple lay east and west—entrance to east; bearing of side of temple, 95°; breadth of stylobate, 69ft. 10in.; of temple, about 42ft.

Height of stylobate and plinth, 17ft. 7in.; courses of temple, 2ft. 11in. and 3ft. 7in.

HUSN NIHA.

References.—"Burckhardt," p. 29; "Land and the Book," p. 61.

This temple stands in a glen about three miles above the village of Niha. It lies east and west, the entrance to east. Magnetic bearing of side, 83° 30′; height above mean sea level, 4,200 feet.

Burckhardt says the temple faces to the west.

The temple is on plan prostyle, and measures in length 80ft. 7in., and in breadth 41ft., including the projections of the antæ. The height from top of cornice to top of platform of stylobate is about 37ft. 6in. The plinths of the columns are 5ft. 9in. square, and are separated from the antæ by 7ft. 2in. The pronaos is 12ft. 9in. by 38ft. 6in., the productions of the side walls being 3ft. 9in. The cella is 58ft. 10in. by 37ft. 3in.; the side walls are 4ft. 4in. thick, the west wall 4ft. 5in., and the east wall of cella 4ft. 7in. The west end of cella is raised up above the floor of temple. No chambers were found beneath the raised portion of the cella. On either side of the cella, inside, are four engaged columns 4ft. in diameter, and about 11ft. apart from centre to centre. At the angles are double engaged columns; these have something in common with those in the synagogues of Galilee. [See Capt. Wilson's paper in "Quarterly Statement," No. II.] These columns have Attic bases resting on a cornice, the top of which is 7ft. 7in. above the floor of the temple, and which runs round the wall of the cella. The capitals of these columns are Ionic.

The temple on outside is of the Corinthian order. The antæ to each present a very curious appearance, in consequence of the courses of the temple wall being let in and moulded. The course above the base course diminishes from 5ft. 5·5in. to 5ft. 1·5in.; the third course has mouldings on it, but is generally 5ft. 11in. thick; the fourth course is 5ft. 11in., and 5th course only 5ft. 1in.; 6th and 7th the same, but the 7th diminishes still to 4ft. 7in., and then comes the capital. This is of the ordinary Corinthian, but the carving of the acanthus leaves has never been continued beyond the bare outline. The antæ at the west end project 4·5in. beyond walls. The base shown on anta is that which runs round the side walls; it was not noticed whether it is also the same on the antæ.

Diameter of columns at base 4ft. 5in.; at the upper end about 4ft. The bases of columns were not seen. The capitals are similar in detail to those of the antæ.

Between the entablature and stylobate there are seven courses in the wall; they differ very much in height, from 3ft. to 6ft.; in all they measure 32ft. 6·75in. They are not bevelled. They do not form the thickness of the wall, but lie on edge, generally two of them, and are cramped together.

Thus stones 6ft. high are not more than 2ft. thick in many cases. The entrance doorway into cella is about 15ft. 6in. in height, and 14ft. wide. It has an architrave moulding round it, rather peculiar.

Within the thickness of wall on north side of doorway is a winding staircase, cut out, leading apparently to the roof.

At the west end of the cella is an upright projecting moulding; probably it has something to do with an image.

The architrave and frieze together, in one piece, measure 5ft. 1in. in height; the frieze is 2ft. high, and is pulvinated.

The cornice could not be measured with any accuracy; it is about 4ft. 4in. in height.

It has lions' heads on the cyma.

The temple stands on a great stylobate, with a very projecting cornice and base. On plan the outer edge of the cornice is shown; this projects about 2ft. 10in. beyond the antæ. The stylobate is 10ft. 8in. in height. It runs round three sides of the temple; but on the eastern side it is produced 28ft. beyond the portico, and runs 6ft. along east side from each angle; and the remainder of the space is occupied by a flight of steps, eight in number. These diminish in width from bottom to top: the bottom is level with the top of base mouldings of the stylobate, and the top with the floor of the temple.

The mouldings of the stylobate only continue for a few feet from east end; the remainder is quite plain, with a simple projecting cornice and base.

The stones of the building are of sandstone and limestone.

This temple is one of the largest next to Baalbec; but it appears to have been built with an eye to making as much show with as little expenditure as possible. The mouldings terminate wherever the eye is not likely to catch them; and the stones of the wall stand on their edges in a most dangerous fashion, the strength of the wall depending upon the strength and ingenuity of the cramps which join the slabs together.

KULAT ESH SHUKIF (BELFORT).

References. — "Robinson's Later Researches," p. 50; "Murray's Guide," p. 538.

This castle has been so well and fully described by Dr. Robinson, that there is no necessity to do more than add a few remarks. He quotes the length as being 800ft., and breadth nowhere more than 300ft., and it does not appear that he took any measurements himself. My measurements give the length of the building from north to south as less than 400ft., and from east to west 100ft., except at the northern end, where there is a projection to east of about 70ft. The courtyard to east of castle is about 50ft. wide, and the outhouses another 50; so that the width of the whole range does not appear to be anywhere more than 200ft. This does not include the batter of the walls, which slopes down perhaps at 60°. This would increase the width by 20ft. to 30ft. The castle lies nearly north and south, the outhouses being wholly to the east, and hanging over a steep descent, running sheer down to the Litâny, 1,500ft. below.

The ditch or moat cut out of the rock is about 70ft. wide to west, and 120 to south. It did not appear to me that this had ever been a wet ditch; but to the north of the castle is a large excavated quarry, which may have been used as a reservoir. In the counterscarp of the ditch are rock-cut cisterns, to which the people from the village below have recourse for their supply of water.

No signs whatever of any Phœnician remains could be found either about or in the walls of the castle. The earliest part of the building appears to be very late Roman or Saracenic; some of the doorways are very similar to those at Saida in the See Castle.

It was extremely difficult to take measurements for the plan of the building, on account of the batter of the wall at bottom, and its ruinous condition at top, which made it dangerous to keep near the edge; add to this, the day was stormy—the first sign of a break-up in the Lebanon summer had appeared, a strong wind was blowing, and the stones were slippery with rain. The plan made under the circumstances is only an imperfect sketch. Some of the sides were measured, others not, and a few of the measurements have got blurred out by the heavy rain that was falling.

The southern end of the castle was not so high by one storey as the remainder; here there were two semicircular towers butting on to the walls at the angles to S.E. and S.W.; diameter of each about 30ft. All the chambers in the castle are vaulted, and the roof flat; and from the lower roof, where are the circular towers into the upper storey of the castle, there is an entrance covered by an arch. This is in three rings: the outer one is nearly semicircular, and may be 11ft. 6in. span, but it is concealed by rubbish; the second ring is a slightly-pointed arch; the third ring is also a pointed arch: it is recessed in behind the other two, so that its face is 2ft. 10in. behind them, and in front of it is a space 12ft. wide, cut for a portcullis to drop behind the huge arch and in front of the small one. The portcullis was about 9ft. 9·5in. wide; the wall here is 4ft. 8in. thick. The stones of this arch are well cut, with bevels or drafts 2in. wide, and it has a handsome appearance.

The semicircular towers must have added very much to the beauty of the castle. They are built of stones 2ft. high, with faces rough picked, and smooth marginal drafts sunk 4in. to 5in., and 3in. to 4in. wide. The upper portions of these towers are perpendicular; but at a certain level, the same as on the main building, the walls begin to batter down at an angle of perhaps 60°. The stones in this are also carefully drafted, and at the top of the batter a handsome moulded string course runs round the towers. The western and northern portions of the castle are built of the same kind of bevelled stone; but to the east the wall has been renewed with a smaller squared stone of a later period.

It is difficult to see why this comparatively modern castle should have been described as being Phœnician.

At the N.W. angle is a Machicoulis window, which at first I supposed to be the latrine, but it appears likely to have been an entrance by which provisions could be drawn with safety. At Marsaba, at the present day, a window of this kind is in constant use, even while the main gateway is left open.

In the tracing is a gateway at the N.E. angle; it has, first, a lintel, and then a flat relieving arch. This latter is composed of three stones; but the bevel is cut in a curious fashion, so as to represent an arch of seven

stones. The drafts are sunk in an inch, and are 2in. to 4in wide. Above is a sunken place in the wall 3ft. high and 4ft. long, where a metal plate with an inscription has probably once been. Round this there is an ornament made by sunken discs 3in. in diameter, and the same distance apart.

On the top of the castle are built two chambers—that to the west measures 42ft. by 40ft. The doorway (Fig. 3) is 3ft. 10in. wide, and has a lintel, and over it a relieving arch of three stones ; the stones have drafts of about 1·5in. wide, which are sunk 0·75in. ; above is a rectangular space sunk into the wall, where a metal plate with inscription may have been.

The chamber to the east measures 38ft. 4in. from north to south, and 29ft. 10in. in breadth. It is a mediæval chapel, and has a handsome doorway. A plan is given of the mouldings of the arches, but below the imposts the stone had fallen away. On one of the stones, on the bed, a mason's mark was observed—a rude *tau* or cross. The walls of the chapel are 3ft. 10in. thick : the interior is divided laterally into two bays, covered by groined pointed arches. The voussoirs lie at an angle of ¼.

Note.—With reference to the plans of the temples, I must do the work and myself justice in stating that the details of mouldings cannot be considered as strictly accurate. The measurements were taken under an endless variety of adverse circumstances — sometimes lying on my stomach, head downwards and heels held, I booked my own measurements. In other cases the stones were half-buried in the ground, or hidden under other stones, so that the eye had to be depended on in getting a perpendicular line. Under the circumstances, I do not for a moment suppose the details to be accurate, though they are just as they measured; still they give a near idea of what these mouldings are. In those cases where there is an appearance of error the measurements are not shown on plan.

The want of a photographic apparatus has left much of the ornament unheeded.

'AIN HERSHAH.

References.—Robinson and Thompson both mention the existence of a temple here, but no description is given.

'Ain Hershah is a village situate on the west side of Mount Hermon, between Hasbaiya and Rashaiya, about two hours from the latter; elevation about 3,050 feet above the Mediterranean. The temple is about a mile further up the hill, at an elevation of 3,600 feet, at the top of a steep wady. What appears to be the summit of Hermon can just be seen from it. The entrance to the temple faces due east (90?), while the bearing to the summit of Hermon is 134°. The temple is very small, and is in very good preservation; the walls, however, are a good deal shaken, apparently by earthquakes. It is *in antis* of the Ionic

order; length 42ft. 4in., breadth 24ft. 1·5in., height from top of cornice to platform of temple, 19ft. 3·5in.; the pronaos is 8ft. 4in. by 19ft. 5in.; the cella, 26ft. 10in. by 17ft. 2·5in. The western portion of the cella is raised 3ft. 4in. above the floor of the temple for 9ft. 2in. On this stand four pedestals supporting engaged columns, two on the end wall and one on each side. The bases are Attic, the capitals Ionic; on the capitals rests an architrave, which only goes as far east as 9ft. 2in.; the cornice above it runs round the wall of the cella.

There are no vaults in this temple, the void spaces being covered over with slabs of stone, which have in most cases been broken through by the fall of the roof, and present to the eye a very confused appearance.

The temple rests on a stylobate, which is 8ft. high at the western end, but runs in to nothing at the eastern, on account of the rise of the rock to east. In the cella, two piers run down the length, to support the flagging for the pavement, which is 14in. thick. The entrance doorway is 10ft. 6in. high in the clear, and 6ft. 10·5in. wide at bottom, and 6ft. 6in. at top. It has mouldings around it, and is handsomely ornamented over the lintel. The diminution in opening from bottom to top I think to be accidentally caused by the shakings to which the building has been subjected; inside the door-jambs are sockets for the door-hinges, cut in the pavement, 4in. in diameter. The *antæ* measure 2ft. 6½in. by 1ft. 10½in. in front; in rear they are 2ft. 2·75in. by 1ft. 10·5in. The columns are 1ft. 10·5in. in diameter near base. It was not observed whether the *antæ* diminish from bottom to top.

On one side of the doorway is a niche. The capitals of the *antæ* have the flat faces of the volutes towards the east and west, and the curved sides to the north and south; in this they differ from Thelthatha, where the four faces of the capitals have a uniform appearance.

On the cornice on each side are three heads, a lion on each side and a tiger in the middle. On the west end, on the tympanum, is the bust of a woman in bas-relief; she has two small horns on her head, and her breasts are exposed, as in the figures of Venus at Cyprus. Below this, about the centre of the west-end wall, is a square of 6in. side, with a right-angled triangle on the upper side, apparently the model of a temple. There is a Greek inscription on the rocks hard by.

There are five courses between the entablature and pavement; they measure collectively 15ft. 0·75in. and each course is nearly 3ft. in height.

NOTE ON THE MOUNDS AT JERICHO.

Mr. Horatio Bland, writing to Dr. Chaplin from Delhi in January, 1869, gives an interesting account of the mounds that are to be found there. He says, "In driving out to Old Delhi, which adjoins the present city, my attention was attracted by some mounds of earth having exactly the same appearance as those at Jericho, and I asked what they

were; the answer was that they were the result of burning bricks in stacks, in this way—a stack of bricks was set up and burnt, and when the burning was completed the good bricks were taken away, and the bad ones and the rubbish were levelled down, and a fresh stack raised thereon and burnt, until at last, by a repetition of the operation, the present mounds of earth were raised. Sometimes the ancients built upon these mounds, so that ruins of buildings are found mixed up in them. Indeed, here there is a very handsome bungalow built on such a mound. . . . . I passed, a little way off the road, one of these mounds, and walked it over. It is of irregular shape, varying in height from nothing to seventy and eighty feet, and covering, perhaps, six acres of ground. In every respect it has the appearance of the Jericho mounds; may they not all have the same origin?

"In the account I gave of the results of our excavations in the Jericho mounds ("Notes on the Valley of the Jordan, and Excavations at Ain es Sultan," page 14), I said, 'The general impression given by the result of the excavations is, that these mounds are formed by the gradual crumbling away of great towers of *sun-burnt* brick.'

"If we had found the interior of the mounds at Jericho to be composed of fire-burnt bricks, I should feel no doubt about their being of the same origin as those at Delhi. But as they all appear to be sun-dried, and were quite soft and crumbling, I doubt if they ever had been put in a kiln; I must, however, observe, that some of the pottery found, and which I suppose had once been baked, crumbled into dust directly it was exposed to the air. The question of the origin of these mounds is one of very great interest; there are a great number of them in the Bukâ'a of Cœlo-Syria, as well as in the Jordan valley, and I also thought I could see some on the east of the Huleh. The fact that in the Jordan valley these mounds generally stand at the mouths of the great wadies, is rather in favour of their having been the sites of ancient guard-houses or watch-towers."

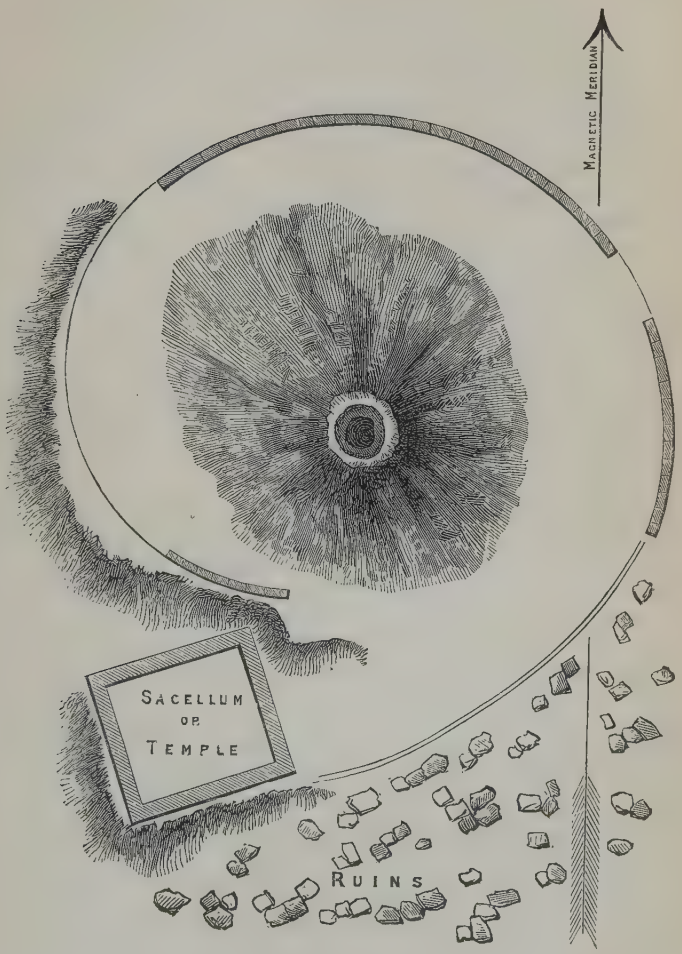
SUMMIT OF HERMON.

HERMON, a portion of the anti-Lebanon range, stretches from north-east to south-west for over thirty miles.

The culminating point is about equi-distant from either end, and is about nine thousand feet above mean sea-level of the Mediterranean. This height was obtained 14th September, 1869, with Aneroid, No. 1837 (Negretti and Zambra). This is also the height as estimated by Lynch and Russegger, but latterly ten thousand feet has been assumed as the real height.

At the top is a plateau, comparatively level; here are two small peaks lying north and south, and about four hundred yards from each other; situated to the west, and separated by a ravine, at a distance of six hundred yards, is a third peak; the tops of these three are in altitude

within a few feet of each other, and together they form the summit of Hermon.



The plateau at top is of an irregular shape, and measures about five hundred yards in diameter: at its north-eastern end the ridge-bone of Hermon fines down to a sharp ledge, on which you can sit and look north and south. This ridge gradually falls to the north-

east, until Hermon becomes lost in the minor hills of the anti-Lebanon. The western peak is separated from the plateau by a ravine about one hundred feet deep, with gently sloping sides; from this peak the ridge-bone runs away to south-west at an angle of 210 degs. with the magnetic meridian. It appears to fall for about a mile and a-half, and then to rise again in a second culminating point, and after that to spread out into spurs; this second point appears to be lower than what is generally known as the summit.

On the northern and western peaks no ruins could be found or any sign that they had been used as places of worship; but on the southern peak there is a hole scooped out of the apex, the foot is surrounded by an oval of hewn stones, and at its southern end is a Sacellum, or temple, nearly destroyed: the latter appears to be of more recent date than the stone oval, and the mouldings on its cornice appear to be Roman.

The oval is formed of well-dressed stones, from two to eight feet in length, two and a-half feet in breadth, and two feet thick; they are laid in a curved line on the uneven ground, their breadth being their height, and their ends touching each other. In some places it almost appears as though there had been two courses of these stones one on the other; many of them are still *in situ* while others are only just overturned; but in some place to the west the stones have been completely removed, and the position they occupied can only be ascertained by the cutting in the rock made to receive them.

These stones follow the inequalities of the ground; where it is shingle they are let in two or three inches; where it is rock there is just a level place cut down to receive them. In one place, where the rock forms a small natural scarp of four or five feet, the stones appear to have broken their continuity and to have been laid at different levels. On the south-eastern side the stones are lying about, but no trace could be found of the site they occupied. The oval appears to have been something of an ellipse, its longer axis from north-west to south-east being one hundred and thirty feet, its shorter axis being about one hundred feet: within, the peak rises for about eighteen feet, and at the apex is a hole cut out like a cauldron, nine feet in diameter and about six feet deep; at the bottom is shingle and rubbish, and the true bottom is probably deeper. The rock is cut and scarped in several places. To the south, and just outside the oval, is the ruin of a rectangular building, whose entrance was to east, the angle of the side is 72°; it is 36ft. 3in. long, and 33ft. 3in. broad; the shorter sides being to east and west. The rock is cut down to receive it; at the north-east angle the rock has been scarped down so as to leave a passage two feet wide between it and the building: at the north-west angle and west side the rock has been cut down to afford room for the building, and part of the lower portion of the wall appears to be cut out of the rock. On the south side the rock falls away from the building; the walls are about 2ft. 6in. thick. In some places two courses still remain, but at the north-east angle and in other parts the wall has quite disappeared. At the south-

east angle the foundations appear to be produced for two feet beyond the walls. On the accompanying tracing the joints of the stones are shown; they (the stones) are of no great size, generally from three to four feet long and extending through the wall. On some of the stones a faint marginal draft is seen, but most of the stones are simply well squared ashlar. The ruins of the temple, for the most part, lie down the hill to the south east; a diligent search was made among these for any signs of mouldings, &c., but nothing could be seen but a piece of cut stone with a circle engraved, and pieces of the cornice; of the cornice there are a great number of pieces, and as there does not appear to be any reason why so much of this should remain and yet other mouldings get lost, it seems reasonable to suppose that this was the only ornament, and that the building was simply a *Sacellum*, that is, a rectangular building without a roof.

It is possible that there may have been columns at the entrance, which, if thrown down with the other *débris*, would most certainly have rolled down the gulley below for at least 2,000 feet; but we could find no remains of columns either in the gulley or at the bottom of it. However, Dr. Porter (Murray's Handbook, page 430) mentions having seen a fragment of a column to north of ruins, and we found two columns at the entrance to a cavern to north-east, which may have belonged to the *Sacellum*. This cavern is hewn in the rock, and has its entrance to the east; it is irregular in shape, about thirty feet in diameter, and is about six to eight feet in height; at the south-west end there is a rock-cut column to support the roof; at the entrance are the frusta of two columns, about nineteen inches in diameter; a sloping ascent leads up to the surface; above is a level platform, sides thirty feet by twenty-six, south-western end cut out of the rock.

The stone composing the oval and the building are of the same limestone as the mountain itself.

To the north-west of the oval we found a stone 4ft. by 18in. by 12in. with a Greek inscription on the face very roughly cut; a squeeze was taken of this, and a *fac-simile* from it has been attempted; it is enclosed. This inscription does not appear to have been noticed by travellers before.

The top of the mountain, when the rock does not crop out, is covered with a small shingle, possibly caused by the disintegrating influence of the frequent frosts and thaws on the summit; on the western slopes the same shingle is found, lying at an angle of 25° to 30°, so that it is just possible for a man to walk straight up the last one thousand feet; on the eastern side the rock is harder, and the shingle is only found in the narrow gulleys; the slope is also very steep, 45° and more, so that the stones and shingle must be continually on the move.

In the winter time the snow appears to extend down the mountain side for about five thousand feet; it gradually melts away as the spring advances, until in September very little is left, and this only in the crevices where the sun is unable to penetrate. In November the snow begins to cover the mountain again.

It is to be observed that the southern peak, where is the stone oval, cannot be seen from any point below except to the east, and the summit generally cannot be seen from the villages at the base of the mountain. From many of the villages there is a culminating point seen, but it is the side of the mountain, and not the true summit.

To the south of the summit is a deep indentation in the mountain, forming a broad valley, perhaps four miles wide; here the waters of the Awaj rise and flow towards Damascus. The existing maps do not give a very correct idea of the features of the country here, or of the positions of the villages, but without a triangulation I doubt if any great improvement on them could be effected.

The village temples about Mount Hermon are, strictly speaking, the temples of Wady et Teim, as several of them, Thelthatha and others, cannot be said in any way to be on the sides of the mountain. It has been previously stated that the manner in which Wady et Teim is closed up by narrow gorges at either end may account for the existence of these temples, while others in the great plain have been destroyed.

The *Sacellum* on the summit has nothing in common in its construction with the temples on the west below, and it may have had to do with quite a different form of worship.

Hermon, no doubt, as being pre-eminent among the high places of Syria and Palestine, must have been the scene of the ancient worship: its stone oval may have been for the same purpose as that of the kaaba at Mecca.

Burckhardt (p. 172, vol. i.) tells us: "The devotee then begins the *towaf*, or walk round the kaaba, keeping that building on his left hand."

Page 173: "The *towaf* is a Mussulman ceremony, not exclusively practised in the temple at Mecca. In the summer of 1813 I was present at the annual festival of the patron saint at Kinne, in Upper Egypt, called Seid Abderrahmau et Keunawy. Each person, as he arrived, walked seven times round the small mosque which contains the tomb."

Page 177: "Prior to the age of Mahomet, when idolatry prevailed in Arabia, the kaaba was regarded as a sacred object, and visited with religious veneration by persons who performed the towaf nearly in the same manner as their descendants do at present."

It appears possible that Hermon may be one of the holy mountains spoken of in the Mohammedan mythology. Burckhardt tells us (vol. i. p. 297), with reference to Adam building the kaaba, that "he collected the stones for the building from the five holy mountains—Lebanon, Tor Syna (Mount Sinai), El Djondy, Hirra, or Djibel Nour, and Tor Zeyt." The sheikh of the Mosque at Jerusalem tells me that Tor Zeyt is the Mount of Olives, considered holy by them because Isa ascended from it; if this is the case, then this myth would be of later origin than the Christian era. Perhaps by Lebanon, Mount Hermon is intended, and the stone oval may have some connection with the towaf of the kaaba.

Of the five holy mountains, we have those on which the ark rested, the law was given, and from which Isa ascended: this disposed of three; the fourth, Hura, or Gibl Nour, at Mecca, the scene of some local tradition; and the fifth, Lebanon. How comes the latter to be classed among the five, unless it is on account of its connection with some pagan tradition?

The only temple which appears to have any connection with the summit of Hermon is one immediately below, at the bottom of a gulley; here there are the remains of enormous blocks of stone, and the building appears to have also been a sacellum; it is, I believe, at present quite unknown, and was, I understand, discovered by the Rev. — Wright a few months ago. I heard of it from the schoolmaster at Rashaiya. There were no springs to be seen near the summit of Hermon, but the muleteers said that about 2,000 feet down there is a spring of brackish water; at any rate, they took their animals somewhere to get water, and were only a short time absent from the summit.

OUR SUMMER IN THE LEBANON. 1869.

Having, through Dr. Brigstocke's assistance, made the necessary arrangements at Beyrout, I returned to Jerusalem to bring our party away.

Sergeant Birtles, who had already had two severe attacks of fever during the spring, was obliged to remain on with his family.

The other three non-commissioned officers were to follow us after three days, and separate at Jaffa. Corporal Ellis to return to England, invalided; the other two to come on to Beyrout.

We arrived at Beyrout on 30th July, and by next steamer, 2nd August, Corporal McKenzie arrived alone, for Corporal Cock, having had a relapse of fever the night before his intended departure, had been ordered to keep to his bed. We went up to 'Aital, where our house had been taken, on 2nd August. We arrived past 10 p.m. Our mules had only just arrived before us, and our party was tired and jaded. As we were groping about in the dark, a pleasant voice behind us asked if Lieutenant Warren was there. On my answering, the voice said that its owner had been waiting for us on one of the roads since dusk, and that all we had to do was to come over to his house, where beds and supper had been prepared for us. We found our good host to be Dr. Bliss, President of the American College.

This little episode is only a specimen of the hospitality towards strangers which we experienced from the kindly Frank community at Beyrout, and which caused us, after our three months' stay, to leave with lively regret.

I was now waiting anxiously for a telegram with regard to Corporal Cock, expecting to be summoned back to Jerusalem; but by the next

mail he appeared in person, looking very much shaken and quite unfit for work. By the end of the month he was pretty well again, and I made arrangements to go and examine the temples about Hermon. But in consequence of the state of the finances of the Palestine Exploration Fund, we were to cut down expenditure. For this purpose we took no cook or dragoman; but Corporal McKenzie catered for us, and Corporal Cock acted as cook and copied plans.

We left Aital 7th September, Corporal Cock with the baggage going round by the carriage-road to Kubb Elias, and thence across the plain to Rashaiya. I went straight across the hills by Muktarah, and had a letter of introduction from Mr. Eldridge to the chief there. Almost the last words I heard before leaving Aital was advice to look out for the lion. It referred to a story which had been current in the Lebanon for some weeks with regard to some wild beast which had carried away people from a village to east of Hermon. A gentleman of much experience in the country had investigated the matter, and learnt that on the Euphrates a canebrake had been fired by some Bedouin, and several lions had been dislodged, and had separated over the country; and one of these was supposed to have located itself near this village to east of Hermon, and was said to be carrying off the children. Of course, there were several versions of the story; but the general drift was to that effect.

We had engaged our horses to take us only to Rashaiya, where we were to stop and ride mules or donkeys, or walk, as might be most convenient, to the places of interest in the neighbourhood. A friend from England had recommended walking; but his experience had been gained in the country during the winter season. At Beyrout I was told that walking in the summer-time would be rank folly; and, though I have found that walking tours in the summer-time in the same latitude in Spain are quite practicable and pleasant, yet I incline to the same opinion as my Beyrout advisers, and think that Syria is not a good country for a summer walking tour, if one has been at all pulled down by the climate. The Lebanon, except in very elevated spots, cannot be called cool in summer; on the contrary, at the same elevation, the average temperature is, I think, greater than at Jerusalem. But its healthiness is so very much greater that many people seem to take it for granted that it is cooler. The heat of the sun is intense, and in walking a constant perspiration would result, which, being frequently checked by the wind when rounding the spurs of the hills, would be followed generally by fever.

We arrived after dark at Muktarah, and rode up to the residence of one of the chief Druse families of the country. My letter was addressed to the widowed lady who presides here during her son's minority, and it is needless to remark on the hospitality with which I was received. My chief difficulty was to explain that I could not stay there the twenty days which the politeness of the hostess fixed upon as the length of my visit, and it was with some trouble that I obtained permission to start next morning at sunrise.

From Muktarah (Sept. 8) we were to take a straight course to Rashaiya, over a road but little travelled. Our hostess insisted on sending a cavass to act as our guide; and without him for the first few miles we should have had great difficulty in finding our way. We did not leave till 6.45 a.m. We crossed (See Ritter, xvii. 94) the rushing stream which gives such green life to this little valley, and then began to ascend by a very steep and rugged path to Kureibeh, a village; this we reached at 7.45 a.m. The estimated height, 3,170ft. We were now among hills, bleak and desolate enough, and I congratulated myself on having sent the baggage round by an easier way, for the path was quite unfit for the mules. Our guide showed me a place where a mule, laden with tobacco, had rolled down about 200 feet, and had escaped unhurt. At 8.10 we got on top of the ridge, 3,780ft., and had to lead our horses down a very steep descent, for 300 feet, when we got into a wady, and then began to ascend again the mountain side, and at 8.40 a.m. reached Ain Yakûty. We continued up the side of the hill, and at 9.25 a.m. reached the ridge at 5,170ft., the highest point in this pass. From hence the view to east of the Bukââ and Antilebanon is magnificent. Hermon lay over against us, quite bare of snow, with the exception of two small specks. The mountain seemed to have only one culminating point, and its height was increased in appearance by two horizontal streaks of haze, which lay the one about 500 feet below the summit, the other about 200 feet below, and stretched for miles north and south. This was not a favourable sign for our getting a good view from Hermon; for, however clear it might be from summit in a horizontal direction, we should see nothing but dim outlines, when looking down at the country below, through those two layers of haze. Between us, and hiding the base of Hermon, lay the range of hills separating the Hasbâny from the Litâny; they stretch north as far as Jubb Jenîn, and to south become merged in the hills of Galilee. They reach in height to about 2,000 feet above the Litâny, and only 1,000 feet above the Wady-et-Teim, in the same latitude; that is to say, the bed of the Wady-et-Teim is in the same latitude, nearly 1,000 feet above that of the Litâny; and this while the latter is still in the plain, and before it has commenced to cut its way through the hills by Kulat-esh-Shukîf. This is a satisfactory reason for the waters of the Bukââ flowing in this direction instead of into the Jordan. I shall have occasion to refer to this matter further on. Our guide told us that the path we had just followed was impassable in winter, and that then people from Muktarah went round by Jezîn. I may mention that in summer time, by the absence of snow, the Lebanon is greatly shorn of its glory, and that for views alone the spring is probably the best time; but for the examination of the country, no time can be better than September, when all vegetation is parched up, and when almost everywhere grapes are given even without asking for them. We now descended, again leading our horses, and arrived at Sughbîn at 10.35 a.m. Near this village there is a most delightful spring of the purest and most icy cold water. At 11 a.m. we had got down to the bridge over the Litâny, at a

height of 2,575ft. It has masonry piers, and sticks and mud are stretched across; it looks very insecure. Every here and there was a hole where a horse's foot had gone through. We now crossed a slight tract of dried-up meadow-land, the continuation of the Bukâa, and began to ascend the chalky-looking hills to a village with a significant name—Baalul; arrived 11.50 a.m., and at noon got to the 'Ain, at 3,650ft. We could hear nothing of any ruins about. At 12.25 p.m., on ridge of hills at 4,450ft., and descended to Rafîd; here we arrived at 1.15 p.m., and remained till 2.20 p.m. We were now only a few feet above the plain of the Wady-et-Teim, which here is about 400 yards wide. We started, and at 2.45 p.m. were at what appeared to be the bed of the Wady, at 3,050ft.; got among broken ground, and leaving Dahar-el-Ahmar to our left, were at the foot of ascent to Rashaiya at 3.40 p.m., at 3,250ft. A few minutes brought us up to the pond at the village, at 3,750ft. I called at once on the Modîr, and presented my letter. He turned us over to the tender mercies of a Protestant schoolmaster, who turned out to be a very worthy gentleman, one of the few natives I have met with in the country who would give a straightforward answer, and tell honestly the price of provisions, hire of mules, &c. He first took us to the schoolroom, and produced coffee and pipes, and got ready a "spread" for us. While he was doing this, we went off with a guide he had recommended, named Abdullah, to search for rooms to hire for our fortnight stay. This man was of the same church, and accordingly took us only to little dingy houses, belonging to co-religionists; for they are mostly poor here. Seeing his game, I declined to go to any Protestant house, when he took us to the house of a Greek butcher, who had two large rooms and two small ones. I hired one of each for a fortnight, and returned to the school. Our food was now ready, served all in one dish, with bread to scoop it out. In the evening, several people came to see the lever, lifting-jacks, &c., which we had brought, and decided that one was a new kind of revolving gun, and eyed it with much suspicion.

Sept. 9. My servant had returned to Aital early in the morning, and we were thrown entirely on our own resources. Luckily, Corporal M'Kenzie had picked up a very fair amount of colloquial Arabic. Our guide, Abdullah, set out with us for Aiha, which we reached in thirty-five minutes. The temple is already described (page 197). It appears to have been built on the extreme northern end of the village, the old wall of which continues to the east some distance beyond the temple. Some tanks were spoken of as being old vaults; these would have been just in front of the eastern entrance. The people talked vaguely about there being large stones and ruins higher up in the village, but nothing of any consequence was seen. There is a good-sized pond, and on its bank a stone which may have been used for crushing olives. The view from Aiha to Kefr Kûk, over the lake, is very fine. One inscribed stone was found in west wall of temple; a squeeze was taken; the letters are Greek.

On Sept. 10 we passed by the same road, on our way to the celebrated temple of Rukleh. Leaving Rashaiya at 9 a.m., we passed Aiha, and

turned up a wady to north-east. In the road we met a small detachment of soldiers coming from Damascus, to relieve others at Rashaiya. They had stopped the night at Katana.

Our guide told us about a wild beast which had come to these parts and carried off children; evidently we had got into the neighbourhood of the lion; he said it had appeared at Burkush not far from Rukleh. At 10.45 a.m. top of Thogret, we descended a little, and turning off to the left among the rocks, passed two or three ruins of cut stone, and at noon arrived at Rukleh.

This village stands in a little plain embosomed in hill; masses of ruins lie about in all directions and mark the sites of large buildings; the two principal remains are those of temples. The first we reached is where the village now stands; the ruins are but a shapeless mass, and we wandered vainly about for some time looking for the great face (of Baal?); we found two Greek inscriptions on columns, of which squeezes were made. Eventually we became aware that the better-preserved temple (that described by Burckhardt and Robinson) was some few hundred yards to the north-east and at a little lower level. This is described at page 199. I am very doubtful whether any part of the wall except at the north-west angle is still *in situ*; it seems only to be built on the old foundations, and old materials are used in a very perplexing fashion. The face (described by Robinson) is most curious, and appears to be looking at you wheresoever you go; but it is not at all likely that it is in its original position. The upper part has been blown away with gunpowder, probably in opes of finding treasure inside. The face probably was placed in the pediment of the original temple at western end, in a similar manner to which the horned lady appears on the west end of temple at 'Ain Hershah.

Besides the three Greek inscriptions found at the temples, there is a fourth somewhat up the hill to the west, built into the wall of house; only a portion of this is now visible.

We remained here till 4 p.m., and on our way back met the soldiers relieved from Rashaiya. Several of them were looking very ill from fever, and hardly able to stagger along.

11th Sept. Left Rashaiya at 6.30 p.m., went south-west, and passing an 'Ain at 7.40, got into Wady-et-Teim; at 8.45 passed an artificial tell, called Tel Thatha, and 9.18 arrived at village of Thelthatha: a temple described page 191. Returned to Rashaiya in evening.

12th Sept. (Sunday). Examined the hills about Rashaiya.

On this side Hermon appears to tower, at its highest point, about 4,000 feet above the neighbouring and parallel hills; these latter are connected with the former by narrow spurs. On one of these Rashaiya is built, and from the eastern end of the town wadies run down towards Rukleh to the north, and to Beit Lahia to the south. The castle was said to have large ruins in it; but on examination, I could find only modern walls.

As there is no spring of water in the town, it may be questioned whether it is the ancient site of a city. The drinking water was brought

up every day on donkeys from an 'Ain to south-west, about an hour distant. Many of the houses are built of masonry; but the usual style is to build up square pillars of masonry for the angles, and fill in the wall of mud or tapia. This is made by beating and rolling hard a compound of mud and straw till it is two inches thick, and then cutting it into squares of two feet each, and drying them till they are like great bricks. They are then laid on edge between the masonry angles of the house, another course on edge is then laid on this, and so on until the required height is obtained; in most cases it is strengthened inside by transverse pieces on edge, and then a second wall of two inches. In the house I was in, the wall had on inside four upright bins for corn made out of the hollow spaces. They were about two feet square in the clear and six feet high, with a large hole at top to put in the corn, and a small hole at bottom for it to run out at when unplugged. The other portions of the hollow spaces were turned into shelves and cupboards. The whole arrangement would be capital were it not for the shelter it gives to bugs. In my room they attack me in hordes, and the mosquito net would only keep out the big ones.

A great proportion of the houses are built with two large square rooms side by side, and two small rooms attached to one of the long sides at each end; and the spaces between the small rooms covered over to act as a verandah, into which all the doors open. Here all the members of the butcher's family slept in the comparatively open air. It consisted of himself wife, a mother and mother-in-law, some other old ladies, a lot of children, and a fat sheep. Two of the party had the fever every few hours, and there was seldom silence during the night for more than three hours, and even then there were frequent squabbles; either the sheep walked over the baby, or the little child with the fever was whipped for making a noise and groaning, or else the butcher was abusing his mother-in-law. We established a cordon in the verandah, past which they should not go; but in the night they generally managed to roll over to our share of the building and helped the other enemies in keeping us awake. The fat sheep was being got ready for a feast, then distant only three weeks. I don't know whether they are all fattened in the same manner, or whether this unfortunate animal had to make up for any lost time; but it seemed to be one old lady's sole duty to stuff it with vine leaves: there she was at it all day and even during part of the night. These leaves about the Lebanon are very much used for feeding the cattle. After the grapes are gathered, the women go into the vineyards and quickly strip the vines, running the hand along each branch. The later growth of the mulberry leaves is also used in the same manner, and it is a curious sight to see the shepherd, mounted up in a tree, throwing down leaves to his flock, who are gathered around with upturned faces. The fig leaves appear to be pulled off and allowed to dry on the ground, but whether they are used as winter fodder, or for bedding, I could not ascertain. The people are more fond of asking questions than answering them.

Our storeman from Jerusalem, who had also been suffering from fever, arrived on Saturday afternoon, just in time to act as interpreter at a visit the Modîr paid me on Saturday afternoon. The Modîr said that Hermon must be visited at once, or we should have a difficulty in getting up, as clouds were beginning to collect. I accordingly made arrangements to go up on Tuesday.

The difference of the atmosphere in the Bukáâ and on the western side the Lebanon is very striking. During the whole of our fortnight at Rashaiya we had dry cloudless days, with the wind in all quarters; but during several of these days we could see that on the Lebanon clouds had come up from the sea and had settled as far as the western height, but they went no farther; later on in the season when there had been heavy showers about Beyrout, the sky had still remained bright in the Antilebanon. This difference in climate is to me very perceptible; I always found the air in the Bukáâ so much more brisk and invigorating, except when the hot winds are blowing. One of the Druse sheihks gave me a piece of advice, the utility of which is, I believe, recognised by the natives. He said, "Don't go to sleep before midnight; if you do, you are sure to catch fever. You get heated and feverish in the daytime, you feed before you go to bed, you get restless in your sleep and throw off your clothes. By-and-by the warm wind ceases, and a cold, chilly breeze springs up, which finds you naked and in a perspiration. You wake up cold and shivering, and pull the clothes over you; but it is too late then, in the morning you have fever."

Monday, 13th September. Left Rashaiya at 6.45 a.m., at 7.50 passed through Beit Lahia, and arrived at Ain Hershah at 8.30, and at the temple 8.50. Described p. 208.

We were told to look out here, as there were amateur bandits about.

This temple is the most perfect of any that we have found about Hermon. No inscription was seen anywhere except some rude Greek letters cut on the face of a rock, which appear to be of a late period, and may have been cut by visitors after the temple had ceased to be used. To the east is a rift in the rocks, closed by a masonry wall, so as to form a small chamber; and there is also the remains of a building which appears to be recent and made up of old material. Below to west is a sarcophagus, with what appear to be sculptured figures tugging at a rope.

We left at 1.45, and returned to Rashaiya along the base of Mount Hermon. At 2.40 p.m. we came on a ruin called the ruin of the sun, and close to was "a hill of the sun." It appears to have been a temple, but nothing now remains but a portion of the S.W. angle. The direction of side is 89°. For moulding see Tracing VII. There are ruins about, but they appear to have belonged to a village. These are placed where two wadies, separating the parallel hills from Hermon, come together, and break out to the west. There was here also what I took to be a modern village, but found it to be a collection of goat pens. The guide said that during the winter the goats cannot be kept at Rashaiya,

on account of the cold; but are brought to this secluded spot, where the snow does not lie.

In making our preparations for going up Mount Hermon, the Modîr said we must have some soldiers if we wanted to go down the other side towards Kulat Jundal. I took one man, therefore, as I wished to go and see a ruin near Rîmeh, which the schoolmaster said Mr. Wright had lately discovered.

We started at 8.30 a.m. on 14th September, with as little baggage as we could manage with; but this required two mules. On our way up we learnt something more about the wild beast of Burkush. It was described as being a very large wolf, and that two charcoal-burners had met it on the mountains, and had thrown stones at it; but it had passed on.

Our road lay pretty level until we passed a pond, at 9.25, when we began to ascend a wide wady, covered with vineyards and orchards. At 10.20, at a height of 4,790ft., these terminated, and we went up the side of the hill by a very rocky path. At 12.10 p.m. we passed a cave, and at 1 p.m. arrived at summit. The last thousand feet was up a steep slope of shingle, with rocks cropping out here and there. There is here no regular path. It was somewhat chilly on top, and the day was hazy. The height of north peak, as obtained by aneroid barometer, was 8,700; but I have called it 9,000, as it is safer to stick to round numbers in a case where a very small error would make a great difference.

I could only distinguish a sheet of water to our south, and there was no sign of Damascus, which I was very anxious to see from here. It was poetically described to me by a gentleman at Beyrout as looking like a pearl set in emeralds. I had brought a theodolite up, but observing was hopeless; and, indeed, the nature of the ground is very much adverse to the taking of a round of angles.

We had hardly got up to the ruins on the south peak when there was a cry of "Dubbein" (bears), and on looking over the wall there were to be seen two large animals—looking in the distance like donkeys—quietly coming up the southern wady, browsing as they ascended. While we were trying to restrain some of the men, two of them, before we were aware of it, bolted off down the hill to the west, and were out of sight in a minute. They soon appeared on the same level as the bears, and coming down on them with the wind. When they had got to about two hundred yards one of the bears turned towards them, and stood bolt upright, with his fore-paws dangling down. They then both moved off slowly to the east. They were now only about three hundred yards from us. Then one of the men fired a shot, which of course only scared them, and they set off at a lumbering trot; the men commenced to run, too, and two more shots were fired. Then one of the bears turned round, and seemed inclined to face his assailants; but, on second thoughts, the idea of a wife and family appears to have crossed his mind, for he turned round and followed his companion. They then started off in a very clumsy gallop, and soon got among the rocks. At first there had been a

chance that they would have been turned up the hill to where we were; but they evidently preferred the rocks. Had we remained quiet at the top, we should probably have been able to get close to them. They appeared to be large animals, standing about seven feet high when on their hind legs, and about their necks was a quantity of tawny brown hair. The natives say that they do much damage in the gardens every year, and that several are killed annually.

We now set to work to examine the summit and take measurements. On walking from the north to south peak, we got somewhat out of the line, and stumbled across a stone with a Greek inscription, of which a copy has been sent; it does not appear to have been observed before by any traveller. We pitched our tents to the east of the southern peak, so as to be out of the wind. It was the first real night's rest since leaving Muktarah, and I slept well, being only awakened once or twice by a tugging at the tent ropes, which made me think the bears were trying to effect a lodgment; it proved to be only the wind.

We had our tent struck some hour before sunrise, and got things in order for a march. It felt bitterly cold, but the thermometer never fell below 36° Fahr., so that we were still some way above freezing; the keen wind, however, took more warmth out of one than a sharp frost would have done. I wanted to see if the sun's rays would light up Jebl Sunîn before Hermon; but there was too much haze, or the Antilebanon was in the way, for we could not be certain when Sunîn was lighted up. The sun's disc rose in a curious shape. It often appears elliptical; but I had never seen it angular before.

On the plain we now saw to east a number of seemingly artificial mounds, similar to those scattered about the Jordan plain and the Bukáâ.

Our water was obtained from snow, of which there were two or three patches on the east side, in crevices. On the north-west side there was still a mass about 400ft. below the summit, 300ft. long and 50ft. wide; this probably remained until covered up by fresh snow.

After examining the western peak, which proved to be about 100ft. lower than the other two, and on which we found nothing remarkable, we started at 8 a.m. Sending down our party by the usual path to Kulat Jundel, Corporal M'Kenzie and I took our course on foot down the steep narrow gulley, where the bears had disappeared, and down which any remains of the temple walls would have rolled. This gulley is steep; so much so that one could only go down very slowly, and angular stones rolled down readily. Our line lay generally over rough rocky steps; but here and there we came upon hanging beds of shingle, which moved off directly we got on to them, and made terrible work with our boots. It was sometimes uncertain whether these beds of shingle would not take us over small precipices; but by taking runs sideways along the gulley, we managed to clear them. We found no signs of any cut stone on our way; but towards the bottom there are stones which may once have belonged to the temple above, but are now much broken up. No signs

of any columns. It took us an hour to get to the bottom, and in that time we had descended 2,500ft. The gulley runs down in nearly a straight line all this distance. For the last few feet we had to get along very cautiously, for we had lost the soles to our boots, and now we anxiously awaited the arrival of our mules; for the idea of completing our journey barefoot was anything but pleasant. At the bottom of the gulley we had arrived on a small plateau, about 300 yards broad, sloping to south; and then, again, the gulley continued down towards the Awaj. In front of us was Arny, a pretty little village, on the southern bank of the Awaj, and lying in a branch wady, all green with willows and walnut-trees. There appears to be plenty of water there. On sending our mules round by the path, and taking a short cut down the gulley ourselves, I had calculated on cutting them off before they could get away from us; but we had been so long in getting down that I began to fear that they had passed the place where we were, and were waiting for us at a point to our east. It was not until we had been waiting nearly an hour and a-half (at 10.25 a.m.) that our party came up, and reported having come down a very bad road all the way. On making inquiries now of the guide for the ruin above Rîmeh, it turned out that he knew no more than I did about them. So we rode on till we met some shepherds, who declared there was no ruin anywhere about. These men were a bad-looking lot, and seemed to grudge us even a good word. At last they said that they had come from a distance, and knew nothing about the place. When we did see a man who knew the country, we found the ruins to be above Arny (on north bank), and far away from Rîmeh. We now went sliding down the hill, passing an 'Ain at 10.45 (5,850ft.), and arrived at the ruins at 11.45 a.m., at 5,560ft.

TEMPLES ABOVE ARNY.

The hill-side here lies nearly east and west, the slope being from north to south. The space for the temples is cut out of the rock, and the stone is used in the walls; it is a limestone conglomerate, and has only been rough-pricked on the face.

There are the remains of two temples—that to the west is a complete mass of ruins, and was not measured. A Greek inscription was found, in a border, on a stone at the western end; but only two or three letters could be made out. Beyond to the west is a narrow gulley, which appears to be a continuation of that which we descended from the summit of Hermon. Here is a rattling torrent rushing noisily past; it appears to come from about the level 6,000ft., where there seems to be a line of springs running down towards Arny, and helping to form the waters of the Awaj. The volume of water that is here allowed to run to waste is enormous; and, no doubt, this was once a well-populated and cultivated valley, while now it appears to be partially under the sway of the Bedouin. The temple to east lies east and west, the angle of the side being 76°; entrance is to east. The rock is scarped to a height of about

15ft. to 20ft., to obtain room for the building in the side of the hill. The length is 107ft. 6in., the breadth 41ft. The walls are 3ft. 6in. to 3ft. 10in. thick, and are 20ft. high to south; they have no batter, and are in ten courses, averaging from 1ft. 6in. to 2ft. 6in. in height each. The same courses do not, however, run right round, and in some places there are stones 3ft. 3in. to 3ft. 10in. in height. On top of the wall is a cornice; the moulding being a cyma between two fillets. Perhaps there was a blocking course above this, but no signs of it now.

The entrance is in the centre of east wall, 13ft. wide and 15ft. high; a lintel in one piece stretched across, but it is now broken. There are simple architrave mouldings round this doorway. There are three rows of columns running up the length of the building, at about 9ft. from centre to centre; and there appear to have been two more rows at east side of the building. It does not seem clear whether these columns were in the original building, or whether they are an addition at some later period. The position of the centre row running up the middle of the building, and so obscuring the view of the altar from the entrance, is quite unusual. These columns are of the Roman Doric, and are 10ft. or more in height. The bases are buried; lower diameter, 1ft. 11in.; the upper, 1ft. 8in. At the west end is a niche, for a statue, perhaps. This temple has nothing in common with any others seen in Cœle-Syria, except that on the summit of Hermon. The court to east is 128ft. long, and same width as temple. Apparently, it had a low parapet wall round it.

We left these ruins at 1.45 p.m., and, getting up into the path, passed Rîmeh to our right, down in the valley, and came to an 'Ain, at 3.30 p.m., 5,470ft. We now turned off along a wady to the left, and got down to Kulat Jundel at 4.15 p.m., at 4,890ft. The guide said we had passed two villages to our right, after Rîmeh—viz., Shirâha and Burbul. These are probably Ain esh-Shârah and Durbul, of Robinson's list.

On our way we met a countryman, of whom I asked some questions about ruins to south. He said there was only Nimrûd (described by De Saulcy). On asking who Nimrod was, he said he had been a great man who used to shoot up in the air with blood-tipped arrows, and when they came down again he would show the blood on the ends, and say that he had wounded the gods. This provoked the gods, and they sent a mosquito, which ate up his nose and got into his brain, and he died in great pain.

Part of this legend is very similar to that given to Layard, at Nineveh (page 25). It was odd in this country to hear a man talking about "the gods."

The castle of Jundel is a small ruin, about 25ft. by 30ft., standing on the northern side of a small wady, falling into the Awaj. It hangs on a rocky spur, facing south. Inside it measures 19ft. by 24ft., and at the west end is a fireplace cut in the rock, with several mouldings round it. The sketch of this has been mislaid. The lower portion of the wall is cut out of the rock. The roof appears to have been vaulted. As on the west side, there is a skew-back; the entrance was towards the east. On the

south side there is a little terrace cut in the rock, 11ft. wide, and from this the scarp goes down very abruptly to the wady, 100ft. below.

The walls are about 3ft. thick; some of the courses measure 3ft. and more in height. There is no sign of any bevels on the stones.

A moulded stone, apparently a cornice, was found close by.

We camped under a tree, near the village. The people came up, and were inclined to be communicative; but we got little information from them. The dust on the ground was very disagreeable, as we had brought no bedsteads. We experienced a difficulty here, which in a less degree is felt all over the Bukââ: we could not get change for the smallest piece of silver.

16th Sept. Started at 6.10 a.m., and very shortly got out of the wady into the great plain to east of Hermon. At 7.20 we passed an upright stone, which appears to have once acted as a boundary mark of some kind. We here passed some pits dug in the ground, and riveted round with masonry, with a little ditch outside. These the guide said were for the hunters to conceal themselves when out after wild boar. We passed somewhat similar constructions in some of the valleys, only without ditches, and these were said to be for concealment in shooting partridges; a decoy bird or two being used to bring them up to the proper spot where they were to be slaughtered.

At 7.50 we arrived just below Burkush, at level 4,050ft.; and 8.45 had arrived at this important ruin; height, 5,200ft.

We were now on the scene of the lion mystery, and on our way up had passed some caves in the rock side, where the sheep are gathered in winter, and in which he might very well be lying in wait. Before we arrived at the ruins of the temple (described page 200), we passed through a ruined village or town of cut stone, with some sarcophagi and slabs scattered about. On one I thought there was an inscription very much defaced; but had not time to come back and satisfy myself about it. We occupied ourselves for six hours in taking measurements of the ruins, and crawled into all the subterranean places that were left open. Some of them evidently are closed up, and are probably full of corn and tibbin.

We made indirect inquiries about the beast, and got very ready answers. Four children in all had been carried off, or had disappeared at intervals of about twenty days; one of them a girl of nearly marriageable age; the others were children. Nobody had seen them taken off. All they knew was that they had disappeared. One woman said that two of the children belonged to her, and that it was nearly twenty days since the last had been taken, and that she was in a great fright for her others, and was too poor to follow the example of other people and leave the village. I heard afterwards that some soldiers had been sent down from Damascus to inquire into the matter, and had not discovered anything. I made several inquiries among the shepherds and fellahs, and they all concurred in saying that they had not lost any of their flock—neither sheep nor calves; but they all voluntarily gave information

about the loss of the children. The only conclusion I could come to, supposing the children really to have disappeared, was that they had been kidnapped by strolling gipsies, of whom there are great numbers. It is curious that at the same time at Jerusalem there were stories of children having disappeared from near Beitin. It was satisfactory to have traced up the story to its source; but I do not see there is any certainty of all the four children having been lost. Perhaps one was lost, tumbled into a cistern, or something of that sort.

We left Burkush at 2.40 p.m. At 2.50 passed the 'Ain to its west, and then made for Rukleh. Visited a rock-cut tomb here, and then passed on to Deir al Ashayir, where we arrived at 6.20 p.m. On our way out of Rukleh we passed a little ruin of a temple (?); and our guide said that south of the road to Rashaiya there are two ruins, one of a temple and another of a convent, but that very little was to be seen but broken stones.

17th Sept. After taking measurements of the temple, and a squeeze of an inscription on a stone to east, we left at 8.28 a.m. The people here were mostly ill of fever, and we could not get any guide, so we had to find our way as best we could to Keneisch. Just before leaving Deir el Ashayir, a man told us of a large cave, capable of holding 1,000 goats, in the side of the mountain. It was too late to visit it. We were also shown several ruins to west, but they were of no importance. We now turned down a wady to north; and, after several mistakes, we arrived at Keneisch, 11.35 a.m. Here are the ruins of very small temples, and the ruins of a considerable village. We left at 12.35, and arrived at Kefr Kûk at 1.30 p.m.

Here were a few stones scattered about, and an isolated column standing up in a pond; it appeared to be Doric. On coming over the dry bed of the lake, which had been ploughed up in the season, the people said that after the rains the water boils up from a hole in the centre, and rapidly fills the bed.

It is to be noticed that the people about Hermon and the Lebanon generally attribute the ruins about to the Franks; while in Palestine they seem to think that they were built by their ancestors. Thus, at Jericho, after uncovering the remains of a Christian chapel, I found the black Bedouin lifting up their hands and calling witness to what *their* forefathers had been able to accomplish. This appears to me to point to the northern people being the descendants of the old inhabitants who had seen the Greeks and Romans come and go; while the Bedouin and many of the Mahometan fellahîn are intruders from the east, and know nothing of the origin of the ruins. The fellahin of Palestine have often told me that they are not the descendants of the old inhabitants, and that they expect the Christian some day to come and turn them out again.

18th. Plan-drawing.

19th. Sunday, and getting ready for a start, our fortnight being up.

20th. We had some difficulty in getting away this morning; everybody wanted backshish. I found it necessary to send a message up to

the serai, and very soon six or seven cavasses came down to clear the way. We left at 8.40 a.m., and first went down to Akraba in Wady et Teim, where there is a small temple. We now went up by 'Ain Hershah, and past Ain 'Ata; and at 1.20 p.m. reached an 'Ain. At 1.55 we reached Kuloway. Here we were shown some pieces of stone which had formed part of a building; but it was not remarkable in any way. We heard, however, of some ruins above at Neby Shaib (?). We started at 2.15 p.m., and arrived at 3 p.m. Our guide was afraid to go up with us, so we took some boys from the village. This ruin is at a height of 3,350 feet, and appears to have been the site of a village. Above, somewhat, is a large oak tree, overshadowing a beautiful stone sarcophagus, 8ft. 7in. long and 3ft. 9in. broad on outside. The sculptured figures are very faint; but some attempt at a copy has been made, under the impression that the posture of the figures may have some mystic meaning. Besides those shown, there is a child lying on its left arm, left leg stretched out, right hanging over it, and right arm on right leg. We returned to Kuloway at 3.30 p.m., and got to Mimes at 4.20, and to bottom of wady at 4.40. Arrived at Hasbaiya at 5.30 p.m. Camp on plateau in wady to east. Height, 2,270 feet.

In the several villages there appear to prevail totally different customs. For example, at Rashaiya, like in many parts of Palestine, the women carry the water-bottles on their heads; while at 'Aital and Kuloway they carry them on the shoulder.

21st September, Tuesday, 8.55 a.m. Left on foot for Hibbariyeh. Arrived at 10.5, and left again 1.30 p.m. Temple described page 194. We here got into the midst of a Moslem funeral, and after it was finished we were troubled in our measurements by being surrounded by the rabble of the village. Our guide took us now over the hills to north to some wonderful sounding stone, where we arrived at 3.8. It proved to be only a loose piece of stone, which emitted a bell-like note when struck. At 3.45 we came to a stone which formed part of a rocky knoll, and which had partially been sawn away, apparently for an olive mill. After this we went up to the tombs of the Franks, which consist of a double sarcophagus cut out of the top of a flat piece of rock. 3.40. We now returned by 'Ain Runia. 4.30. To Hasbaiya; this excursion appeared to have exhausted the ruins in this part of the mountain.

I should have mentioned that at Neby Shaib there is a cave under the sarcophagus, in which a lamp was burning; and they said a sheikh had been lately buried there. We found also at Deir al Ashayir that a shiekh had been lately buried in the temple. And altogether more reverence seemed to be shown to these sites than one would expect from sincere Mahometans.

22nd September. We had made our preparations the night before; and, leaving our heavy things in charge of the schoolmaster of Hasbaiya, set out for Banias. Corporal Cock and the tents went by the lower road, while Corporal McKenzie and I went over the hills, so as to visit Bustra.

The muleteers we had got were a dreadful set of old men, who ap-

peared to think we were quite capable of murdering them and carrying off their mules. When we had selected the least old of the three to go with us over the hills, he begged and implored one of the others to go with him and protect him. We left at 8.10 a.m., and got to Hibbârîyeh at 9.40. Here our muleteer said he did not know the way, and we were obliged to get a Mahometan, a fine old fellow, to act as guide (the muleteers were Druses). At 10.45 we arrived at a plateau, being the top of a spur of the Lebanon. At 11.10 we passed a square tower, which appears to have once been a guard-house to command the road, called Melelîneh. Left at 11.20. Cut across to a ruin called K. Shâba, which was a mass of cut stones on an isolated knoll. Arrived at 11.52. Passed by an 'Ain at 12.55; and, after losing our way for some minutes, we came upon Bustra at 1.40 p.m. A ruin of a village, similar to a great many others about the mountain; but, as a ruin only, not worth seeing. Bottom of hill at 4.20, and Banias 4.50.

I tried to get a guide now for the Castle of Subeibeh; but the people seemed to be suspicious of us, as we were without dragoman or cook; and none would go with us.

We left at 5.50 a.m., and found our way up by ourselves, not meeting with a soul going up or coming down. I wished to see the bevelled stones on the castle, now that the green stuff about the base is all dried up.

I agree with Captain Wilson in thinking that the castle may not be "earlier than the eighth or ninth centuries, A.D." But at the S.W. angle I came across what appear to be the remains of an older structure, probably a temple. Some of the stones are very large, being 3ft. high and 6ft. long, while those of the castle generally average about 1ft. 9in. in height and 3ft. in length. Probably these stones would be covered by creepers, &c., in the spring.

Got down to Banias at 9 a.m.

At the south gate, on a column, saw mason's marks, a copy of which has been made.

I could hear of no more ruins about Hermon, and considered it would be losing time to continue any longer about.

On looking up the Bukáâ from Hermon and other heights, I nearly always noticed the villages to be placed in close proximity to out-cropping patches of a white, chalky formation. Whether water gushes out near these patches, or whether the vines grow better on them, I am not aware.

Being desirous of seeing the temple of Kades and the synagogues of Kefr Birim, we left Banias, after our return from Subeibeh, on 23rd September, at 9.50 a.m. Went by way of Hunîn, and on our way through the forest beyond, Corporal McKenzie was caught by a branch and thrown on his head on a rock and a good deal damaged. We arrived at Kades at 4.40 p.m. The temple here has little in common with those of Cœle-Syria. It is on a stylobate, which has base mouldings, but no cornice. The courses vary in height. The frieze appears to have been

pulvinated (?). The entrance is to the east. The keystone of the flat arch over the southern niche has shoulders on it, so as to prevent it slipping. This is a very general practice in existing Moslem work in the country; but it is the only instance in which I have noticed it to occur in Roman work. In a country subject to earthquakes, its value is obvious; and I had often wondered how the Moslems had obtained the idea. Had the same system been adopted at Baalbec, in the small temple, it appears likely that the great keystone over the entrance would still be in its place.

23rd. Sept. We rode to Kefr Berim. We left at 10.50 a.m. for Yarûn. Shortly before reaching it we passed a large sarcophagus, 8ft. 3in. by 4ft. 10in. and 4ft. 4in. high, and 2ft. 4in. by 6ft. inside; it had lately been blown out of its place by a fellâh. There were here the foundations of a temple 60ft. long and 30ft. broad, lying east and west; entrance apparently to east. Some of the capitals at Yarûn were very curious; in the pond close to the church is a slab of stone sculptured. Left at noon and arrived at Bint Jebsil at 1.10 p.m., and at Tibnîn at 3.40 p.m.

I had a sharp attack of hot fever during the day, which partially yielded to a lump of charcoal which I procured and swallowed at Yarun. I was unable to go up and see the castle at Tibnin, but was told that there were no traces of old masonry about it.

24th. Sept. Left 7.30 a.m., arrived at Rubrika at 9.45 a.m. This village appears to have possessed a Jewish synagogue; but it is fast being removed. Some columns still remain: they are monoliths, about 2ft. in diameter and 10ft. high; in one, the capital is curious, in one piece with the shaft (see sketch); on a curved stone there was a bas-relief of what appears to be a pot of manna. Outside the village is a stone with what appears to be a Syriac inscription. Left here at 10.5 a.m., made for Kulat ash Shukif, and had some difficulty in finding the bridge, as the country is here very wild. At noon arrived at an 'Ain in Wady, and at 1 p.m at the bridge, Kakayeh, over the Litâny, and at 3.35 p.m. we arrived at the ruins of Belfort (described p. 206).

Two of our muleteers now refused to go on with us, and as I did not wish to go back into Wady el Teim, I sent Corporal McKenzie with these men to Hasbaiya to get other animals and to bring on our stores; he was to meet us either at J. Burghus on Sunday night, or at Jubb Jenin on Monday night. After taking measurements in the castle on a rainy morning (27th Sept.), we started at 11 a.m. and got to the Jisr Kardeli at 1.15 p.m. and at Jisr Burghur at sunset; on our way we passed a Maronite village, where for the first time we were asked to pay for the grapes offered us, which were growing in the field.

Early in the morning of 28th Sept. our muleteer came running in to say that Corporal McKenzie had passed the village a few minutes before and gone over the bridge. I could hardly believe it, but passed an hour in vainly shouting after them, and as the road lay up a steep hill and every now and then in view, they ought to have heard and saw me if they had been there. We left at 8 a.m. and passed up along the east

bank of the Litâny; the positions of the towns about here appear to be incorrect in Van de Velde's map. As we passed along I began to look out the reason why the Litâny should have cut its way so deep into the hills here; and it appeared to me that there had here been a series of lakes into which the Bukââ, then a swamp, had drained, and that the overflow from the lakes, in a greater volume than that of the river Litâny at present, had gradually cut its way back from the sea, and so opened a passage by which the waters of the lakes had escaped.

We went down to the natural bridge of el Kuweh and arrived at Jubb Jenin at 3 p.m.; hearing of no ruins on the road, except Kankaba, which was out of our way. We had now spent every farthing with us, and were obliged to get our muleteers to lend us some bread. Later in the evening Corporal McKenzie arrived with the baggage and fresh mules: he had had great difficulty at Hasbaiya in getting away. He had never been near J. Burghus, and the muleteer had invented the story about their having passed over the bridge. I sent off Corporal Cock early in the morning with the heavy things to Aital. On his way he was thrown from the back of his mule and suffered from the injuries he received for some days.

We started at 8 a.m. and arrived at Zekweh (described page 202) at 10.5 a.m., and at the temple of Mejdel Anjar at 12.15. As we went up the hill to it, it appeared to be quite a small ruined building, and it was only on standing close to it that I realised its noble proportions. It is the finest piece of masonry I have seen in the country: the courses are about 4ft. high each, and are beautifully bevelled.

The stylobate, as at Kades, has no cornice. There are bases of columns about, similar to those of the larger temple at Baalbec. The entrance faces north east; angle of side 28° 80′. We now passed on to Deir el Ghazel, where I heard there was another temple; but we only found part of an architrave. A schoolmaster there said the stones had lately been used for building purposes. At 5.15 p.m. we arrived at Haish al Ghanin, a little village of mud hovels, and our tents arrived some time after dark.

Wednesday, 29th Sept. A very cold morning. We were up at 4 a.m. and could get no milk or eggs as the villagers were still in bed; but we got a dish of wheat from a man who had been up all night boiling it in a great cauldron. We had now come to an end of our charcoal, and it took a long time to get water hot with the fire made from the cow dung we had collected in the field. Started at 6.30 a.m., passed through meadow-land intersected by narrow and deep dykes, with rotten banks. We then passed over an undulating tract until we passed Serin at 7.30, when the country again became a level plain. Took our line by the telegraph wires, and at 9.5 got our first view of Baalbec. At 10 a.m. we arrived at the ruined wely about two miles south-west of Baalbec. A plan of this was made, and also a restored elevation. The curve of the dome was obtained from some of the stones lying about; this wely is described by Burckhardt (p. 12). The mihrab is formed of a stone sarcophagus set upon end, and

is directed nearly to south. On the north side, on the architrave, is a Cufic inscription, of which I have seen no previous mention. The tomb is placed so that the face would be to south.

The stones are cramped together.

We left at 11.15 and arrived at Baalbec at noon.

My object in visiting Baalbec, was for the purpose of comparing the more ancient part of its walls with those of the Haram Area of Jerusalem.

Not having Wood and Dawkins's plates with me, I am not aware of the conclusion they came to with regard to the three-stone temple. And the restoration given by Robinson and by Murray (reduced from the restored plan of Wood and Dawkins) is of a time after the latest pagan additions; the older work being made to run into the later pagan in a manner very perplexing to those who have not seen the temple and have not Wood and Dawkins's plans. As the plan is on such a small scale, it would not perhaps be right to call it incorrect; but it certainly did not convey to my mind that the wall round the large temple is totally distinct and separated from the later work. I have, therefore, given a plan of this larger temple and restoration, of the plan and elevation of west end.

It appears to me that this temple stood alone, and I could see no indication of the court to the east having originally formed part of it. It measures 294ft. by 154ft. It stands east and west; the entrance to the east, and bearing of side about 79° 30′. It appears to have been hypœthral. The outer sides of the plinths of the columns are flush with the faces of the wall. The wall it stands on is about 46ft. 6in. in height. It has thirteen courses, each 3ft. 8in. to 3ft. 9in.; and in this respect they resemble those of the Haram Area at Jerusalem. The system of bevelling is also very similar to that at the Jews' Wailing Place; but, the stone at Baalbec being softer, the work has been done more quickly, and the chisel marks have a disagreeable appearance, radiating from several centres, as though the workman had stood at one point and rapidly struck off all the stone that lay within his reach. The system of laying the stones is, however, different to anything to be seen at Jerusalem. There is first a course of stretchers of about 18ft. in length; above is a course of headers about 3ft. each; then stretchers again, and so on alternately, giving a neat and uniform appearance to the whole structure. The wall can be seen for its entire height on the north side, and partially on the south side; but to the west it is covered up by later work. On the north wall, at east end, are several incised characters; some of them Arabic inscriptions, some Hebrew (?), and there is a Byzantine cross; and there are also characters which appear to be Phœnician, at least they are very similar to those on the Sea Castle at Saida. On the north side of the temple is a void space of 25ft. 3in., and then the wall of big stones. This wall is also to be seen on the west side, where its outside is nearly the same distance from the wall of the temple as on the north; and it appears probable that the great wall also continues round on the south side (see "Robinson," p. 512), and that the ditch to west and east has

nearly been filled up; but I do not think with Dr. Robinson that it was intended that the wall of the temple should in the original design have been covered up by filling in the ditch. My impression is that the ditch was to have been left open, and the great outer wall placed in front to protect the inner wall against the assault of the battering-ram, which would have very soon brought down the colonnade, could it have played freely against this wall of comparatively small bevelled stones. The covering wall consists of two courses of 4ft. 4in. and 4ft. 8in. in height, and then the great course of 13ft. to 14ft. in height, and above this, at the west end, the three stones of about 13ft. in height. It will be seen by the restored elevation that the size of the columns are out of all proportion to the heights of courses in the inner wall, so that without the outer wall it would lose its grandeur of appearance at a distance. I have to suggest that the bases of the columns and the shafts may belong to the original temple, and that the capitals and entablature may be of the time of the later addition, or may have been reworked at this time. A section through one of these bases is given (Fig. 7).

30th Sept. Left Baalbec at 7.15 a.m. Arrived at isloated column at 8.50, for elevation of the lower portion of this Corinthian column. Rode over to village of Mokhana 9.50, and got to Yunin at 10.45 a.m. Here we could hear of no ruins, though the foundations of one are spoken of in "Murray's Guide," page 541. We, however, saw something very like a ruined temple on top of a hill, and insisted on going up there, in spite of the assertions of the inhabitants that the nearest ruins were at Nakleh. On getting up to the top of a hill close by we found in front of us (11 a.m.) merely a ridge of rocks. We now took the road to Nakleh, and arrived there 11.45 a.m. It is situated in a gorge to south, about 200ft. above a stream, where are groves of mulberry and other trees. In the conglomerate rock of the hill-side are several grottoes. The temple is already described. Left 12.15 p.m., and arrived at Baalbec 1.20.

Left Baalbec at 4.15 p.m., and encamped the night at the little village of Talliyeh, where we arrived at 7 p.m.

On 1st October, left at 6 a.m. for Kusr Neba, where we arrived at 8.7. Description given already of temple. The people here were extremely hospitable, and brought us out fruit. They said that there were old quarries a little farther up the hill, and a large ornamented stone near. We now started, 8.50, for Husn Niha; but missed our road, and got up into a very hilly country. We separated to look for the road; but were misled by the country-folk, who also bothered us by answering our shouts. At 12.15 p.m., I had found my way to Husn Niha, and was joined soon after by Sergeant Birtles (who had arrived the day before at Baalbec). He had got into some awkward place in the hills with his horse, and they had rolled down a hill together. He was a great deal bruised. Husn Niha is already described. Left here at 2.10, passing Niha when a plan was made. Got into the plain at 3.34. Passed Zahleh. Near here I passed some acquaintances from Beyrout, who, seeing us

approaching without saddles or bridles, and mounted on mules, took us for muleteers sporting Frank hats, and were astonished to be greeted in English. Arrived at Stora at 5.40 p.m. Went up the carriage road, and arrived in camp at 7.30 p.m. Started at 2.50 a.m., and arrived at Aital at 6.35 a.m. on morning of 2nd October.

TOUR TO AFKA.

Having examined most of the temples of Cœle Syria, I proposed going to Afka, and then by the Cedars to Demetris, and so to take in the few temples on the west side of Lebanon.

People were just now leaving the mountains for Beyrout, and all the best mules were engaged. We could get no arrangement made in the hills, and so sent down to Beyrout, where a man undertook to supply us with animals. It appeared afterwards that he had found the same difficulty about getting mules, and had put up with very bad ones.

On 8th October, the day fixed for our departure, it rained heavily at intervals all the morning, and, apparently, the summer had broken up; for there were dense clouds to be seen in all directions. We had no time to put off our journey, and started the mules at 2 p.m., following soon after.

This time we took a cook, Antone, who speaks a little English. Corporal Cock had not recovered his fall, and remained behind. Corporal McKenzie accompanied me. Before we reached the Beyrout river we had overtaken our baggage, one of the animals a weak horse, the other a lame mule, both going very slowly. We rode on to the Dog River, and waited there for the baggage, hoping to get to Ajettûn that night; but it was not to be our fate, and we encamped at the mouth of the river; for the baggage did not arrive till a long time after sunset. In the morning we tried to get other mules, but were unable, and started off to Antûra, the road being extremely steep. I considered it necessary to keep behind the mules all that day, as the muleteers appeared to be untrustworthy.

We went up along the northern bank of the Dog River and passed Deir Tanneis on our right. The name given to me was Tammeis, and I thought it might have to do with the Tammuz of the book of Ezekiel; but Robinson gives it Tanneis. It is, however, to be remarked that there is a Deir Tamis given in Van de Velde's map in the Bukáâ south of Kubb Elias. On coming over the Nahr es Salib, we saw a bright yellow stream running several hundred feet below us, so yellow that for a long time I thought it must be sand. On getting down we found it to be a foaming torrent which we crossed by a bridge. On returning this way two days after, we found no water in this ravine (the rain having stopped); but at the mouth of the Dog River, the sea presented a sheet of yellow; and it could readily be seen that if the ground about the Nahr Ibrahim (Adonis) is of a red sandstone, the sea at its mouth, after a heavy rain, might be of a ruddy hue and so give colour to the liquid; certainly the

imagination could scarcely be got to consider the yellow hue of the sea at the mouth of the Dog River like blood.

As we got passed Ajettûn, rain began to fall and continued all day; we got into Mezráât Kefr Debien at about sunset, and here encamped. Height 390 feet. Here I tasted the only flavoured grapes I have come across in the country: they had a distinct muscatel flavour, and were said to have come from the sandstone formation.

We passed a very disagreeable night. About 11 p.m. the wet side of my tent flopped down on me, and on getting up I found the muleteers were not to be seen, and we had to go out frequently into the rain and drive in the pegs of our respective tents, the ground being like a sop.

Sunday, 10th October. Heard that our muleteers had deserted us and were bargaining to take a load of salt down to Beyrout; we rushed after them and brought back the mules, leaving the muleteers to follow. We now left Antone to keep guard and bring the baggage to Fareiya, while we went round by Fukrah and the Natural Bridge. Left at 1 p.m. and arrived at Fukrah at 1.57 p.m.

FUKRAH.

References.—"Robinson's Later Researches," p. 613; "Murray's Guide," p. 555.

The ruins of Fukrah are peculiarly placed. We had been travelling over blocks of sandstone from Mezráa, when, in the distance, athwart a spur we were mounting, we saw a raised bristling back of blue limestone. On the upper part of this is a square tower, a mausoleum; lower down the hill to south the limestone is cut away and the temple is built of a yellowish-green-looking stone, which appears to be partly oolitic free-stone, partly a hard claystone, crystalline in parts, and here and there looking as if it had been submitted to a great heat. It is possible that the reason why this green stone was used in preference to the blue lime-stone, is because it is *found* in blocks on the surface of the ground, which require little cutting to bring them square. It is very odd to see the blue limestone cut away and the temple walls built green in its place; every here and there a blue stone appearing, isolated, in the wall; and in one place, in an engaged column, there is one blue stone and the rest are green. This temple is 55ft. 6in. wide on the outside and about double this in length, and it appears to have been hypœthral, as no signs of any entablature or pediment were found except in front, nor any columns inside. The entrance is to the east, the line of the side being 88°.

There are eight courses standing in the walls about 2ft. 2in. each in height; the walls are 3ft. 8in. thick, and have two stones in the thickness bonded together; the inside is quite plain. At the entrance are pedestals of columns; the dados have rough projecting faces and marginal drafts, the whole roughly cut; the capitals are Corinthian, and similar to those at Zekweh and Husn Niha.

Outside to the east there is a court with an entrance, and engaged columns on either side, some blue, others green, capitals Roman Doric, a cornice lying near, a simple cyma. The stones of the court inside have faint marginal drafts.

Part of an entablature lies in court, frieze and architrave in one; the former pulvinated, the latter similar to that at Zekweh and roughly cut. As plans of this temple will probably soon be published in M. Rénan's work on Phœnicia, I took very few measurements.

The mausoleum above is fully described by Robinson. The lower part is of blue stone, the upper part green; we found in the inner chamber that some work was going on; there was a shaft half-sunk, and a jumper and spoon, lying at the bottom, apparently had been left for the Sunday. Our guide said Adan Bey was doing the work and looking for treasures. Outside were some potsherds which had been brought up from the shaft.

It is possible that some country people may have wished to put a charge of powder inside and blow up the building, so as to get the building stone; or more likely, that some Frank archæologists may have been making researches there.

We left at 2.20 p.m. and arrived at Natural Bridge at 3.45 p.m. (4,990ft.), and got down to Fareiya by sunset: our mules had just arrived.

11th October. We were here 4,000ft. above the level of the sea, and as the weather had broken up the night was very cold. Luckily it was fine, so we got some sleep and woke on a morning almost frosty. Leaving Antone to get the baggage to Akoura how he could, we went by ourselves down the valley somewhat, in search of the road to Afka. Our Arabic for this part of the country was of very little use, for besides other difficulties they soften the K, and Akoura becomes A-oura, and Afka, Affa; but our mode of leaving out the K did not satisfy the people, and they showed us the way to Antura and any other place but what we wanted. I thought it better to trust to the map, incorrect as it is, and just before getting to Meruba, struck up a wady to north-west. We now got into a lovely country: rocks of bright red sandstone covered with fir-trees, rhododendrons in full bloom, and ferns. We were now at about 5,000ft. and found the vines growing vigorously. As we kept along, we saw a magnificent wady opening up before us, with great beetling cliffs all round it. We passed by a small village called Suwaiteh, and turning to our right found the village of Afka in front of us. We passed through a great many fields of young corn which had just come up. The fellahin here sow it some time before the rains come on: it then has time to become strong before it is covered up with the winter's snow, and preserved in that way till the spring. We arrived at Afka at 12.25 p.m. This remarkable place is described by Robinson (p. 607), and "Murray's Handbook," p. 555.

The limestone rocks here, of which a wonderful section is exposed, appear to lie in their original horizontal position. I crawled into the cavern above the fountain and could see nothing remarkable. The water,

as at Banias, at this time of year springs out of the ground at some distance below the cavern.

The ruined temple is a very shapeless mass; this is the only instance I have observed of mortar having been used. The courses vary very much in height: they average about 1ft. 6in. each.

On at least three stones in the wall facing the fountain, the letter ⊓ is incised, about 2in. high. In this wall are the mouths of two aqueducts, which appear to flow during the rainy season; at least, the lower one does. I crawled up both: in the lower one the water appears to issue from a subterranean passage in the mountain side, which it was dangerous to enter. The upper one was too small for me to go up more than a few feet.

We left Afka about 3 p.m. and took our road over the bridge towards Akoura, as directed by an old woman. We were in a wady, and continued going up at north-east till 4.20, when we got into the commencement of a vast undulating plain at 5,610ft. After a short time the road, which was excellent, divided into two, and we took that to the right, and cantered on in hopes of seeking Akoura in front of us. Our way lay over lines of hillocks, with mounds across here and there damning them up, so that in spring they should be ponds. I could not find out whether these dams were artificial or not. We went on and soon found ourselves overlooking the great tract of the Bukáâ, with the sunset lighting it up gloriously. There was no time to admire the view, we were evidently on the wrong road, and cut across into that which had turned to the left; but after following this some distance we could find no tracks of anything recent on it, and so gave it up, and thought to get back to Afka. The sun had now set, but by the light of the moon we thought to pick our way. Soon, however, we found we were out of the old track, and in another ten minutes we awoke to the uncomfortable idea that we had lost our way, and had the chance of passing a night in an atmosphere which chilled one to the bone. We now took a line to west, in hopes of cutting into our old road, but only got more confused, and at last I settled to take our course by the stars and make it nearly west, hoping by this to get down at least a little lower and out of the wind, which was very cutting; but the curious thing was, we were always getting higher, and ever in front of us was a hill higher than that over we had just scrambled.

The highest point registered was 7,000 feet; but no doubt we were higher than this. So that we were wandering over a plain only 2,000 feet less in height than the summit of Hermon. What I feared for most was lest we should get among crags, when we would either have to leave our horses or retrace our steps. We had no overcoats with us, and had eaten nothing since morning except a little Arab bread at Afka. Still, we scrambled on, leading or driving our horses; and as we went the hills appeared to get higher and the wadies deeper, so that our way seemed interminable. Up some hills which were simply masses of rock we had to push the horses. At last we hit on a track, and, following it up joyfully, came upon an open space which smelt very strongly of goats.

Hurrying on to where the tents of the Bedouin ought to be, we found nothing but charred places, where their fires had been; they had gone away for the winter. It is amusing to think how our hopes dropped at each disappointment. First we thought to be in very late to a cold dinner. Then that we might get to some village, and get put up for the night. Then that we might strike a Bedouin encampment, and stay with them. And now even that hope was dashed, and all we looked forward to was getting down a little out of the wind. Straight on we went, and were nearly starved with cold. Eventually we came on a small track, and followed it up till it appeared to go down, gently, continuously. Until this time we had constantly been rising; so here was hope.

The moon now dropped out of sight, and we lighted our lantern, which by some lucky chance had got into the saddle-bag. Down the track we went, losing it constantly, and picking it up by means of the lantern. After getting on some distance, we heard the barking of dogs somewhere down below us in the distance, and afterwards saw the light of some village, which I supposed to be 'Almît. Soon we heard the brawling of a stream, and then came upon ploughed land. The cold now had become somewhat diminished. We made an abortive attempt to get to the light; but we came upon the edge of what appeared to be a yawning abyss, so we tried back on our track again.

Some water began to gush out from the rocks, and we slaked our thirst, for we had not met with water since Afka. Now we lost our path again, and found ourselves hanging over some awkward-looking places. After some time we came on a rivulet, the bank of which we followed until we passed a goat-pen without a door. Passing this, we found precipices all round, and our lantern had gone out. We went back towards the goat-pen, and could not find it; but, after some wandering, found we had gone up the banks of the wrong rivulet to look for it. We now got into the goat-pen, and gave the horses a roll; but cold, wet, and weary ourselves, we found no place for rest.

It was difficult to imagine where we had got to; and on hearing some footsteps approaching (at 4 a.m.) I stepped out to ask where we were. There were two men and some donkeys passing. I had hardly said "Good morning" to them, when they gave a shout and bolted, taking me, I suppose, for a gin. In another hour it was light enough to see our way, and we got our horses out and led them down the steep place that had puzzled us in the darkness. After about an hour's ride the country appeared to become familiar to us, and a few minutes after we stood in front of the temple of Fukrah. In some extraordinary manner, we had come back right behind Afka, and were now five or six hours to the south of it. But we had not come by the lower road, but behind the village to east, and close to the edge of the frightful precipices which tower round it. How we managed it I cannot tell. But it is quite apparent that if the line we had taken had been 10° more towards the west, we must have come right upon these places, and have come to grief. As

it was, I believe we had once or twice been close to the edge. We now pushed on to Mazraa-Kafr-Debien, and put up at a sort of general shop of a Maronite. We had had no food for eighteen hours; but this did not hurry the good man of the house, who kept us waiting an hour while he told our story to his friends. We now tried to get a message sent to Antone; but there is a deal of humbug about the best of these people, and our friend of the shop unkindly upset our arrangements just as the messenger was going off, and eventually the message, I believe, never got off at all. After another half-hour we started for Dog River, arrived there at 3 p.m., and got to Aital some time after dark, after a tramp of about thirty-six hours. Antone, not seeing anything of us at Afka, thought we must have gone on to the cedars, and followed us, as he thought. He did not get back till four days after us.

Antone gave a curious answer one morning when reproved for giving stale eggs, the ends of which were hollow. "The hens are very thirsty here; they don't get enough to drink, and so cannot fill their eggs."

It was extremely fortunate that while we were wandering above Afka the sky was clear. If it had been cloudy, we could not have walked in one direction, or have seen the dangerous places; and, as the country at this time of year is not inhabited for miles round, we were not likely to have met anybody to put us right.

It being considered desirable that I should pay the Governor-General, Reshid Pacha, a visit at Damascus, I went there from Beyrout, and was introduced to him by Mr. Wood, the Acting-Consul. He expressed great interest in our work, and said he would write to the new Pasha at Jerusalem on the subject. He also said he was anxious to get a copy of my reconnaissance of the country east of the Jordan, and offered to guarantee my safety there if I would extend the survey north and south, and would provide an escort at the Government expense.

He gave us authority to move the inscribed stone from the summit of Mount Hermon.

The S.W. angle of the Mosque at the outside struck me very much. (See photograph No. 13.) You have first a wall with pilasters at intervals (as at Hebron), the imposts having Egyptian mouldings. Above this, a course of stones and a Corinthian-looking cornice; and then a wall, apparently Roman, with masons' marks on the stones. The wall with the pilasters extends to north as far as the buildings will allow of its being seen; to east it extends perhaps eighty feet (not measured); then a straight joint, and the line is continued by another wall, the lower part of which appears to be of a Roman temple and the upper part early Christian with arched windows, perhaps the Basilica of Arcadius. On the stones of these arches are masons' marks, and on the stones of the wall at the S.W. angle, *above* the cornice, are masons' marks. (See Photograph No. 13.)

On the stones below the cornice and between the pilasters I could see no marks.

Both the architecture and the masons' marks give us three epochs in these walls.

Supposing, then, the present Haram to have been a Christian Basilica of end of fourth century (see Robinson, p. 462), built on the remains of a temple of Juno of second to third century, we have still the portion of wall below the cornice at S.W. angle to account for; and it may be either Ptolemaic, or even part of the earlier "house of Rimmon."

As the Ptolemies put the Egyptian mouldings on their temples of Dendera and others, so also they may have brought the same mouldings to Damascus. But, on the other hand, we have Mr. Fergusson's authority (Arch., p. 168) for a very similar moulding being also Assyrian; and the system of pilasters along the wall appears also essentially Assyrian (see Ferg. Arch., plates 46 and 69).

The pilasters at Damascus project about 5in., are five feet wide, and about fifteen feet apart. The wall between appears to have been plastered, and perhaps also the pilasters.

I cannot find that this portion of the wall has been spoken of before. I am aware, however, that one gentleman (an eminent architect) has seen these mouldings, and considers them to be of a late date. (See Tracing XIV.)

The finding of incised masons' marks of different styles on many buildings in Syria has led me to think that they might be instrumental to a certain extent in giving an approximate date to the time when the stones were first cut. Thus we have already seen that in the Damascus mosque the marks are different on the pieces of masonry of different periods. We find this to be the case also at Burkush, where the old work has certain marks, while what appears to be Christian has a totally different mark. At Banias there are marks. At Kulat ash Shukif, on the chapel, on the bed of a stone, there is a mark; and at Afka, on the old wall, there are on three stones the same letter.

The walls at Baalbec are covered with characters, some of them Arabic, others Hebrew (?), and some appear to be Phœnician. I have got squeezes of the latter, but not very clear ones. We have already noticed the Phœnician characters on the stones of Saida, and those on the Haram wall of Jerusalem.

Perhaps something might be made out of the letters themselves, supposing they may refer to the name of the workman or of the architect; as we find at certain places certain letters prevail, and it is not every stone that is marked.

Thus, at Afka, the three marks are on stones, separated by one or two others; and at Burkush there are a great number of Δ's, but not all close together.

As an example, the H on two stones at Jerusalem might be supposed to stand for Herod or Hiram.

On the hill-side to north-east of city, near Jebb Kasyûn, I found a great many nodules sticking in the limestone rock. I have kept some of them; they appear to be coprolites.

On my return to Beyrout, I found the sledge ready which I had ordered for transporting the stone down the side of Hermon; provided, also, with a truck, handspikes, &c., we started 27th October. It was late in the day, and we could not get farther than the 39th kilometre, at about 4,000ft. Here we slept in the open, and, luckily, the wind was not very cold. Our cook had disappeared during the darkness, and we did not discover him till early next morning, at Kubb Elias, where he had hurried on to get us some food. The idea of telling us where he was going to had never entered his head, although there was no occasion for us to have passed Kubb Elias at all. This village has a most voluminous spring of pure water. The ruined castle, perched upon a little hill, appears from below to be quite a modern building. To the south of the village, on the face of a steep rock, is a very conspicuous tomb, cut out. (For sketch, see Tracing XIV.) I could not ascertain whether it gives its name to the village, or whether it had anything to do with the prophet. We now started right across the plain to the opening east of Jubb Jenin. For the first mile or two the country was alive with people, Bedouins and villagers, cutting and carrying the Indian corn. At 2 p.m. we arrived at the gorge opening into Wady et Teim. Here, to the right, is a small necropolis, the tombs being all rock-cut. One of them (See Tracing XIV.) has a triangle in red paint over the door, and red paint-marks on each side.

By sunset we arrived at Rashaiya, where I met Captain Burton, from Damascus. Next morning, before daylight, we ascended the mountain together, and arrived at the summit about 9 a.m. The sledge was got up soon after, with a set of twelve men from the village to draw it.

The stone was in a hollow at west end, and would have travelled in time towards Hasbaiya; it weighed about 18 cwt. We put it into the truck, and got it pretty easily over the first portion, which was down hill; but when it came to getting it up to the crest to east, the men could not drag it. In cutting some projecting pieces off the rear, it broke neatly in two, and now we were able to get them along with some trouble to the brow of the mountain. The pieces were now put on the sledge, with men in front to drag and behind to check; but the machine was too lively. When started it went off at twenty miles an hour, and the men had no notion of checking it. The first time it bounded down some 300ft., and then turned over. We got it in hand again, but the men were in no order; and after its just shaving a man's leg, I thought it better to try only one piece of the stone. It was of no use, the men were like so many children, quite incapable of working together; and so the stones were carefully covered up in the shingle, and left. Had we had our workmen from Jerusalem, we should have had little difficulty in the matter.

We arrived at Rashaiya after dark, and arranged with a man that he should bring the pieces of the stone on mules to Beyrout by the next Saturday. At 2 a.m., Corporal M'Kenzie and I started for Beyrout, without any guide. It was nearly pitch dark, and we lost our way. After

plunging through wadies and over hills, we at last found ourselves over at Raffêd; and before daybreak we had got into the Bukâ'a, and, pushing on, got into Beyrout that night.

There now remained a temple near Antura, which Mr. Fraser had discovered, and which I was anxious to see.

It is about seven or eight hours from Beyrout, near Antûra. We stopped a night half-way at the house of a hospitable French silk manufacturer, and next morning went on to see this temple. It is in the last stage of decay, 53ft. by 33ft., on a stylobate ft. wide. There are five courses in the wall, and one is 6ft. high, one stone weighing 10 tons. Stone on edge, 6ft. high, 2ft. 1in. wide, and 10ft. long. Entrance was towards the east.

ITINERARY TO SHOW APPROXIMATE HEIGHTS OF PLACES VISITED IN SUMMER OF 1869.

Heights in Feet above Mean Sea Level of Mediterranean.

September 8.

		Feet.
6.45 a.m.	Muktarah	
7.45 ,,	Kureibeh	3170
8.10 ,,	Ridge	3780
	Wady Bottom	3460
8.40 ,,	'Ain Yakuty.....	3610
9.25 ,,	Top of Pass	5170
10.35 ,,	Sughbin	3050
11.2 ,,	Jisr over Litâny ...	2570
11.50 ,,	Baalul	3350
12.0 ,,	'Ain do.	3650
12.25 p.m.	Ridge.....	4450
1.15 ,, / 2.20 ,,	Raffîd	3350
2.45 ,,	Wady et Teim	3050
3.40 ,,	Foot of Ascent.....	3250
4.0 ,,	Pond Rashaiya.....	3750

September 9.

10 a.m.	Left Rashaiya	3750
11.20 ,, / 1.25 ,,	Temple 'Aiha	3750
2 p.m.	Rashaiya	

September 10.

9 a.m.	Left Rashaiya	3750
10.45 ,,	Thoghret	5120
Noon.	Rukleh, Upper Temple	4780
4.0 p.m.	Left Lower Temple	4680
5.10 ,,	Thoghret	4780
6.20 ,,	'Aiha	

September 11.

		Feet.
6.30 a.m.	Left Rashaiya	
7.40 ,,	'Ain	3160
7.55 ,,	Beit Sahia.....	
8.45 ,,	Tel Thatha	2950
9.18 ,,	Thelthatha Temple	3780

September 13.

6.45 a.m.	Left Rashaiya	
7.20 ,,	Bekeiyifeh	3150
7.50 ,,	Beit Lahia	2850
8.30 ,,	'Ain Hershah	3050
8.50 ,, / 1.45 ,,	Temple of 'Ain Hershah	3680
2.40 ,,	Kasr Shemsu	3560

September 14.

8.30 a.m.	Left Rashaiya	
9.25 ,,	Pond	3750
10.20 ,,	Top of Gardens ...	4790
12.10 p.m.	Cave	7700
1 ,,	Summit of Hermon	8700

September 15.

6.0 a.m.	West Summit	8600
	Bed of Valley between.....	8500
	North Peak	8700
	South Peak	8700
8.0 a.m.	Commenced Descent.	
9.0 ,, / 10.25 ,,	Bottom of Gulley...	6300

		Feet.
10.45 ,,	'Ain	5850
11.45 ,, / 1.45 ,,	Ruins of Temples...	5560
3.30 ,,	'Ain	5470
4.15 ,,	K. Jandel	4890

September 16.

6.10 a.m.	Left K. Jandel	4890
7.20 ,,	Upright Stone	4050
7.50 ,,	Plain below Burkush	4050
8.45 ,, / 2.40 ,,	Burkush	5200
2.50 ,,	'Ain	5000
4.0 p.m. / 5.0 ,,	Rukleh	4790
6.20 ,,	Deir al Ashaiyir	4280

September 17.

8.28 a.m.	Left Temple of Deir al Ashaiyir	4050
10.40 ,,	Wady	4560
11.35 ,, / 12.20 ,,	Keneiseh	4500
1.30 p.m.	K. Kûk	3860
	Bed of Lake	3680

September 20.

8.40 a.m.	Left Rashaiya	
9.15 ,,	Akraba	3350
9.35 ,,	Wady	2880
9.45 ,, / 9.55 ,,	Temple	3150
10.45 ,,	Wady below B. Lahia	2750
11.23 a.m.	Wady	2950
Noon.	Abreast of 'Ain Ata	
12.40 p.m. / 12.57 ,,	Jebmelkeh	3880
1.20 ,,	'Ain	3700
1.55 ,,	Kuloway	2950
2.15 ,,	Ruins	3080
3.0 ,,	Sarcophagus	3350
3.30 ,,	Kuloway	
4.20 ,,	Mimes	2500
4.40 ,,	Wady	2090
5.30 ,,	Hasbaiya	2270

September 21.

8.55 a.m.	Left Hasbaiya	
10.0 ,,	Wady	2180
10.5 ,, / 1.30 p.m.	Hibbariyeh	2270
1.57 ,,	Burj	2900
3.8 ,,	Sounding Stone	2660
3.45 ,,	Sawn Stone	3350
3.50 (?)	Sarcophagus (East Tomb)	3260
4.15 ,,	Suweiha	3250
4.30 ,,	'Au Kunia	3050
4.50 ,,	Hasbaiya	

September 22.

8.10 a.m.	Left Hasbaiya	
8.30 ,,	Dervish el Kulwel	2550
8.45 ,,	'Ain Sufa	2400
9.40 ,, / 9.55 ,,	Hibbariyeh	2150
10.45 ,,	Plateau	3580
11.10 ,, / 11.20 ,,	Mehlineh	3950
11.52 ,,	K. Shâba	3460
12.35 ,,	'Ain	3260
1.40 p.m. / 2.35 ,,	Bustra	2500
4.20 ,,	Wady	1050
4.50 ,,	Near Banias	1100

September 23.

5.50 a.m.	Left Banias	
6.50 ,,	Subeibeh	2270
9.0 ,, / 9.30 ,,	Banias (?)	1600
10.5 ,, / 11.0 ,,	'Ain Tel el Kady	600
11.40 ,, / 12.0 ,,	Hasbâny Bridge	500
12.45 ,,	Foot of Hills	
1.45 p.m. / 2.0 ,,	Hunîn	2180
3.22 ,, / 3.40 ,,	El Jebl	2050
4.40 ,,	Kades	1400

September 24.

6.40 a.m.	Left Kades	1400
7.30 ,,	Village of Algerines	1450
7.45 ,,	Wady	1250
9.55 ,, / 10.25 ,,	K. Berion	2270
11.5 ,, / 11.15 ,,	Yaruûn Point	2380
11.20 ,, / 12.0 noon	Yarûn	2380
1.10 ,, / 1.25 ,,	Bint Jebsil	2270
2.20 ,, / 2.40 ,,	Beit Tahûn	2760
3.40 ,,	Tibnîn (200ft. to top)	2150

September 25.

7.30 a.m.	Left Tibnîn	
9.45 ,, / 10.5 ,,	Kubûka	1620
12.0 noon	'Ain in Wady	750
1.0 p.m.	Jisu Kokâníyeh	450
3.45 ,,	Belfort-camp	2050

		Feet.
	September 26.	
	Top of Ruin	2090
11.45 a.m.	Left	
noon	Village	1700
1.15 ,,	Kardeli Jisr	700
3.0 p.m.	Buweideh	2100
	September 27.	
8.40 p.m.	Left Jisr Burghûr	1520
9.45 ,,	Kelyah	1850
10.35 ,,	Village in Cleft	2280
11.40 ,,	Yamûn	2730
12.20 ,,	Natural Bridge	2150
1.0 ,,		
1.50 ,,	Sahmûr	2480
3.0 ,,	Plain near J. Kurûn	2450
4.0 ,,	Jubb Lenîn	
	September 28.	
8.0 a.m.	Left Jubb Jenîn	2650
9.0 ,,	Ghiryzeh	2620
9.30 ,,	'Ain	2532
10.5 ,,	Zekweh	2750
11.10 ,,		
12.0 ,,	Megdel Anjàr	3200
12.45 ,,	Temple	
1.25 ,,	'Ain Anjar	2600
2.45 ,,	K. Zebad	
3.0 ,,	El 'Ain	
3.25	Al Ghasel	3250
3.45 ,,	Deîr al Ghasel	2850
3.50 ,,		
5.15 ,,	Haush al Ghanîn	2750
	September 29.	
6.20 a.m.	Haush al G., left	2750
7.30 ,,	Serîn	
8.30 ,,	W. Berutan	
9.5 ,,	Saw Baalbec	3250
10.0 ,,	Octagonal Wely	3250
11.15 ,,		
12.0 noon	Baalbec	3450
	September 30.	
7.15 noon	Baalbec, left	
8.0 a.m.	Hill	3510
8.50 ,,	Column	2940
9.35 ,,	Mukhana	3200
10.40 ,,	Yanûn	
11.0 ,,	Top of Hill	

		Feet.
11.45 ,,	Nukleh—water	3760
11.50 ,,		
12.15 ,,	Temple, left	3870
1.20 ,,	Baalbec	
4.30 ,,	Left Baalbec	
7.0 ,,	Camp Talliyeh	3150
	October 1.	
6.0 a.m.	Left Talliyeh	3150
7.10 ,,	Ruins of a Mill	
7.40 ,,	Bed Naya	3100
8.7 ,,	Kusr Neba	3601
8.50 ,,		
12.15 ,,	Husn Niha	4200
2.10 ,,		
3.15 ,,	Niha	3300
3.34 ,,	Village	
4.30 a.m.	Zahleh	
5.40 ,,	Stora	2750
7.30 ,,	Camp	4250
	October 2.	
2.50 a.m.	Left Camp	
3.40 ,,	Top of Road	
6.35 ,,	Ain 'Aitat	2040
	October 10.	
1.0 a.m.	Meyraat Kep Debien	3860
1.57 ,,	Fukrah	4800
2.20 ,,		
3.45 ,,	Natural Bridge	4990
4.40 ,,	Fereya	4050
	October 11.	
7.10 a.m.	Left Fereya	
10.0 ,,	'Ain	4580
11.15 ,,	Schwaitch	3870
12.25 p.m.	Afka	3400
4.20 ,,	Thoghret	5610
6.0 ,,	Plain	6750
	Highest Point registered	7000
	October 12.	
5.0 a.m.	Goat-pen	5100
12.15 ,,	Ageltûn	2570
	October 31.	
	Kubb Elias	2250

THE ROCK TOMBS OF EL MEDYEH.

Dear Captain Warren,—When I told you of the rock-tombs near El Médyeh (not as Van de Velde has it, "El Mediyeh"), which I believe to be the tombs over which Simon erected the mausoleum with the seven pyramids, &c., for his parents and brothers (*v.* 1 Maccab. 13, 27 *seqq.*, and Joseph. Ant. xiii. 6), and of the other rock-tombs near 'Abûd, which, like those of El Médyeh, had never, for aught I know, been visited, nor at least mentioned, by travellers, you desired me to give you a description of those tombs which you might communicate to your Committee, and I am most willing to comply with this wish of yours.

I had visited El Médyeh, and seen the tombs there before, but only *en passant*; yet even then the site of El Médyeh and the name of the tombs, "Kubûr el Yahûd," *i.e.*, "Tombs of the Jews," strongly impressed me with the opinion that El Médyeh occupies the place of Modin, and that the "Tombs of the Jews" are the remnants of the Maccabæan mausoleum; and you will remember that I spoke to you of this *discovery* as soon as I had returned from my tour. This time (in October, 1869) I spent nearly two days at El Médyeh, and found leisure to inspect the *kubûr* more closely.

Just opposite to the village, which lies on the top of a considerably high hill or ridge, on another ridge, forming the west side of the deep and narrow wady between the two ridges, at a distance of about 1,100 yards in a straight line, you come to a kind of terrace from fifty to to sixty paces long (east-west) and some forty paces broad (north-south), slightly sloping towards the east, and with a noble prospect towards the west, comprehending the whole tract between that ridge and the coast, with a wide expanse of the sea.

On this terrace I counted about twenty-four tombs. Along its south ledge there was a row of ten or eleven of them. On its south-west end, but advancing somewhat towards the middle, I found two, one smaller; and in the same line, a little downward, again two. More downward still there was a large one, which I shall more particulaly describe hereafter. Farther down still again a large one, and then three small ones, and below them one more as large as the other large ones. In the north-west corner there was another of the same size, and some feet above it, on a prominent mass of rock, I saw an old wine-press scooped out of the rock. Some feet below the south border, or ledge, of the terrace, and fronting the west, extends the fore-court of two tombs, one in the perpendicular rock of the west side, the other in that of the north side, *i.e.*, in the ledge, which forms with the ten or eleven above-mentioned tombs the south border of the terrace. The entrances to these two tombs were thoroughly obstructed. But I must now describe the tombs on the terrace.

They were all of them scooped out of the horizontal rock, in the shape of coffins, or sarcophagi; but, although they were nearly filled up with earth, one could discover in their longitudinal sides flat-vaulted niches (*loculi*, θῆκαι), so that it was evident that the coffin-like excavations were but entrances of a length which only in one or two cases exceeded 1·50 metres. All these entrances were originally covered with very massy stone lids, the largest of which was 2·20 metres long and 1·5 metres broad, and 0·70 metres thick. But most of the lids were either broken or pushed off.

The large tomb, of which I promised a particular description, had its lid still *in situ*, but it had been so far smashed at its bottom (the lid) that one could creep through the aperture. On the east side of this tomb or entrance there were a few steps (three ?), and on the opposite (west) side was the entrance to a chamber with five niches. There was no door visible; its fragments were probably buried in the rubbish.

Now, before I enter into an exposition of the arguments which I have to adduce on behalf of my opinion respecting Modin and the Maccabæan mausoleum, I must still mention that at a distance of about 200 yards east-south-east of the terrace of the just-described tombs, on a level stretch at the foot of a slope leading from it to the terrace, I found a block of a rock, whose front side was hewn out in the shape of a bevelled free-stone, apparently prepared for the basement of some monument, but with no trace of a tomb beneath or under it. Near this stone and a solitary fig-tree I found six tombs, hewn out of the level rock, like those of the upper terrace, and of similar dimensions. The wrought surface of the bevelled block was 1·20 metres long.

In 1 Macc. 13, 27 *seqq.* (I must quote from the Vulgate) we read:—"*Et aedificavit Simon super sepulchrum patris sui et fratrum suorum aedificium altum visu, lapide polito retro et ante; et statuit septem pyramidas, unam contra unam, patri et matri, et quatuor fratribus; et his circumposuit columnas magnas, et super columnas arma, ad memoriam aeternam, et juxta arma naves sculptas, quæ viderentur ab omnibus navigantibus mare. Hoc est sepulchrum, quod fecit in Modin, usque in hunc diem.*"

The description given by Josephus is nearly the same. Ant. xiii. 6.

According to Eusebius and Hieronymus, Modin was situated near Diospolis, or Lydda. As you know it has been in later times shifted from place to place, not to Latrûn (*castellum boni latronis*) only, but to Soba, far up in the hills, at a distance of about fourteen miles from Lidda in a straight line; nay, to a place south of Anathoth (!).

At all events, as regards nearness to Lydda, El Médyeh has the strongest claim to identity with the Modin of Eusebius, &c. From Soba, to be sure, the sea is in full view; but nobody will say that it is near Lydda, and there, as well as far more still on the low hill of Latrûn, the pyramids, in order to be discerned by seafaring people, ought to have been of an extraordinary height—at Latrûn much higher

than the highest Egyptian pyramid. On the contrary, the prospect from the Kubûr el Yahûd is commanding both land and sea, and not intercepted by the intervention of hills, which would cover it to observers from a distance of about thirteen miles (Soba is about twenty-four miles distant from the sea in a straight line). Hence the superstructure of the tombs, and the pyramids upon, or by the side, or in front of, that superstructure need not have been of a giddy height, in order to be discernible to people out at sea near the coast, in the afternoon and evening hours, when the rays of the sun must have illuminated the splendid erections of polished stone; and the Kubûr were not only near Lydda (one mile nearer than even Latrûn), but so situated as not to belie that part of the old description which seemed to involve an exaggeration.

But there are no remains either of the superstructure and the pyramids, or of the columns; the number of the tombs surpasses that of seven three times; and the name of El Médyeh, which we have to derive from Mada, has nothing in common with the Hebrew *yada* (according to Rosenmüller's explanation of the name).

These objections are very serious, yet I will try to show that they may be removed without taking too much liberty.

As regards the absence of all traces of the constituent parts of the Mausoleum above ground, we must consider that such monumental structures are much more than other edifices exposed to a radical eversion, as their columns and polished stones are not only very alluring, but may be got to and cleared away with far less effort than those of other more complicated buildings. Moreover, it is well known that sepulchral monuments, and especially so magnificent ones as the Maccabæan Mausoleum must have been, always were, and still are, considered a kind of treasuries, a circumstance which all over Greece, Egypt, and the countries of anterior Asia, has so much contributed to their being so frequently utterly demolished. As regards the number of the tombs, everybody will admit that, after the *seven* had received their occupants, other members of the family or the kindred may have chosen the place next to the mausoleum as fitted for their last dwelling. Finally, concerning the discrepancy between the names, I, too, must confess that it appears irremediable, if Rosenmüller's derivation and interpretation of *Modin* (מוֹדָעִין or מוּדָעִים, they who give notice as from a watch-tower or look-out) must be accepted as correct, because the Arabic words for plough-share, boundary, term, &c., exhibit not a single point for reconciliation.

However, I waive all support from the names of the ancient town and modern village. To me the designation of the tombs as "Kubûr el Yahûd" (Tombs of the Jews) seems to be a very strong argument in favour of my view. The whole of Palestine, to be sure, is full of Jewish tombs, yet they are not distinguished by that name, except at places where, beside the Jewish burying-grounds, there are those of Christians or Moslems also—all still in use—when the name of "Tombs of the

Jews" is given in contradistinction. Consequently we have to consider the tombs near El Médyeh as bearing the name "Kubûr el Yahûd," κατ'ἐξοχήν, and are justified in concluding from this κατ'ἐξοχήν designation, that the Jews there buried must have been peculiarly eminent Jews, whose family name fell into oblivion as soon as the Jews themselves were cast out of their country, whilst the memory of those eminent Jews was preserved in the name, "Tombs of the Jews," and in the tombs themselves, which, far and near, were the only ones of distinguished Jews.

But I must still refer to another circumstance which, in my opinion, is not less pregnant. Do not tombs excavated in the level rock, and that beside other tombs hewn out of the perpendicular rock, indicate that they were in this way fashioned for the erection of a monumental superstructure of some kind or other? It cannot occur to our mind that such tombs were destined for the poor, since the expenditure required by them was certainly considerable enough, and quite sufficient to achieve the purpose in a more tasteful and durable way, by excavating a perpendicular rock, as those flat tombs were far more exposed to destruction by undermining rains and resurrectionist jackals. The massy and unhandsome stone lids, too, whilst they may have been placed over the tombs as a last protection against profanation or sacrilege, almost compel us to believe that their shapeless aspect was concealed from sight by some covering of a more graceful or dignified form.

I hope the "Kubûr el Yahûd" will soon be visited by more competent judges, and the much-ventilated Modin question conclusively solved by them.

But I must now enter upon another question, which I am afraid will prove, as we Germans say, a very hard nut to crack.

From El Médyeh I went to 'Abûd, another village, north-east of the former. Since the Frenchman, M. V. Guérin, has discovered (in 1865) the identical tomb of Joshua, near Tibneh (Timnath Cheres or Timnath Serach), Abûd, which is but three-quarters of an hour distant from Tibneh (W.N.W.), has been visited by some very few travellers. Robinson, Thomson, Van de Velde—in fact, none of the travellers who have written books on Palestine—speak of 'Abûd, as far as I recollect; nor have you or Captain Wilson been there, for aught I know.* Well, it is just such out-of-the-way places that belong to my line of travelling, and to me they frequently are the most interesting virgin soil in more than one respect.

Of course I would not leave 'Abûd without having seen the tomb of Joshua and the other rock tombs near Tibneh; but after I came back to

* The tombs at 'Abûd were examined by Capt. Wilson, R.E., and Lieut. Anderson, R.E., in 1866, when plans and drawings of the most important were made for the Palestine Fund. On an old lintel in the village was found the following Greek inscription:—
ΑΡΤΤΡΙΟΝΤΟΤΑΠΟΥ.

Jerusalem I discovered that Joshua's tomb, which I had seen and taken for it, is not the one which Dr. Hermann Zschokke, the rector of the Austrian Hospice in Jerusalem, has described in his "Beitraege zur Topographie der Westlichen Jordan's Au," Jerusalem, 1866. I showed you my sketches of those tombs. Yet, it is not of them that I will now speak, but of another discovery of mine, the reward of my not pursuing the track of the tourists.

Soon after my arrival at 'Abûd, I asked for the way to Tibach, whither I intended to go the next day. "If you want to see tombs," said one of the people, "you may see plenty of them here in the neighbourhood;" and he pointed to the peak of a steep basement of rocks forming the north extremity of a ridge or spur running west of the village, at the distance of about a half mile from it. No doubt I went thither as soon as I was at leisure, and found all along a terrace extending at the foot of the rocks and below it, rock-tombs which reminded me both of the tombs in the valley of Hinnom, and of the so-called tombs of the judges. For those in the steep cliff itself (south side of the terrace) the terrace formed the fore-court, and two of the tombs there had ante-chambers. That of the more distinguished was 600 metres long and 300 mitres broad. On the architrave of this tomb were sculptured ornaments: a bunch of grapes in the middle, rosettes, triglyphs. In its chamber there were twelve niches. The other was plainer, *i.e.*, without ornaments. At the foot of the peak and near its middle were small entrances to tombs of an artless description. The length of the terrace was from 170 to 180 paces. On its north and east sides were other tombs of a plain kind, with fore-courts. The one next to the east side of the terrace had a very large fore-court, about 100 paces long: the entrance to its tomb was on the south side, and in a rock receding a little from the line of that side, there was another tomb or chamber, down to the entrance of which led a few steps. This chamber contained five niches; but as I had to make my survey in a hurry, I am not quite sure whether my statements, as regards the interior of the tombs, are correct. It was after sunset that I begun to examine them, because I had spent the short time left to me before sunset in walking over the whole ground and sketching the principal tombs. The place may have been a burying-ground for centuries before, and during the times of the Seleucides and Romans; and there can be no doubt but that a town of some note must have occupied the site of the village 'Abûd. But which? The name 'Abûd affords no key for tracing it to an antique original. In the times of the Crusaders—and perhaps before them already—'Abûd and the surrounding country must have been one of the chief allotments of the Church, as there are no less than six deirs round about it, in two of which divine service seems to be still continued, occasionally at least; and 'Abûd itself, being inhabited at equal parts by Christians (Greeks) and Moslems, has an old church—El 'Abûdiyeh—which is the name of a ruined deir also, quite near the village. As Van de Velde has discovered here the traces of the Roman

road leading from Jerusalem by Tifneh (Gophna) to Antipatris, this circumstance is rather favourable to my supposition that there may have been a place of note hereabout. Well, there is Tibneh, whose identity with Timnath Cheres and Timnath Serach cannot be questioned, as the other Timnah, too, on the borders of Judah and Dan, has been changed by the mouth or tongue of the Arab into Tibneh; and our Tibneh here certainly lies in one of the mountainous regions of Ephraim. But Tibneh had a burying-ground of its own, and that of 'Abûd would have been too distant—three miles.

That Timnath Cheres or Serach and the Thamna of Josephus are all *one*, I have no doubt; yet, I think that the Thamna (Θαμνᾶ) of Josephus was a second edition of Joshua's *Timnah, i.e.*, that old Timnah had been deserted for some reason or other—perhaps on account of the Roman road—and rebuilt on the site of 'Abûd. In the course of time, this Thamna or Timnah, more exposed to the invasions of all the successively conflicting powers, may have lost both the original and the transmuted names, through long desolation; whilst the latter pertinaciously clung to the primitive Timnah, or the village which sprung from it, and is at present a heap of ruins only. 'Abûd, which thus would represent the second Timnah, or the Thamna of Josephus, did not recall the old name to life again.

But I feel I cannot get a solid footing, and will therefore leave this question also to be solved by a more penetrating sagacity and the judgment of those whose profession is archæological research.

Before I conclude my somewhat lengthy epistle, I must mention a few other discoveries which may be interesting enough to one so sedulously inquiring after the vestiges of bygones as you are. It is very little what I have still to say, and will not take much of your time.

From the hills I went down into the plain to places I had often visited in former years.

On my way to Kefr Saba (Antipatris?) I passed by Mejdel Yába (Mirabel), near which—between it and Mezraáh—I had many years ago discovered that ruin, which was afterwards visited and photographed by Captain Wilson (No. 110), to whom I had pointed it out as most remarkable. Robinson had been very near it—half a mile perhaps—but then struck into a more west road.

As to Kefr Saba, I am quite sure now that it does not represent Antipatris, which must be looked out for between Kalat Ras el Ain and the mills of El Mîa, or perhaps in the depth of the Aujeh marshes at the foot of the castle hill. I shall another time give you my reasons for this opinion. Between Kefr Saba and the sea-coast—in a straight line—I found two khirbehs. The first, about one and a-half miles west of Kefr Saba, did not show forth any trace of antiquity; its name is Khirbet Sebyi. The other, Khirbet Tûbsur, half a mile farther west, presented a curious relic—the only one visible above ground. It showed between broken remnants of walls what I must call two small apartments; the inside plastering, an indestructible red cement, was

still smooth, and there were in one of the rooms pretty large fragments of a tesselated pavement. The upper part of those rooms was utterly destroyed, and of their ceiling or roof not a vestige left. To me it occurred that it might have been the villa of a Roman. You have seen my sketch of it.

On my way back to Jerusalem, between Gimzo and Beth Horon, at a place about three or four miles east of Gimzo, and one mile distant from Khirbet Shilta farther onward, I saw a rock-tomb underneath a long ledge of rocks, which, with a natural pillar, formed the roof of the ante-chamber. The entrance to the tomb, two chambers, was a few feet above the bottom. Not far from it, and near the road, there was a ruined open cistern (pool) of antique appearance.

It was impossible to take bearings, and before I met people to ask for names, more than one hour had elapsed, a lapse of time which you know forbids a circumspect traveller to ask questions still about what is so far behind.

The postscript is finished, and therewithal

I remain, my dear Captain Warren,

Very faithfully yours,

Jerusalem, December 28, 1869. CH. SANDRECZKI.

THE STONE OF ZOHELETH, EN-ROGEL AND THE KING'S GARDENS.*

Jérusalem, 22 *Février*, 1870.

A PEU près au centre de la ligne suivant laquelle se développe le village de Siloam, il existe un plateau rocheux surmonté de constructions Arabes, qui en masquent la véritable forme et l'étendue ; la face occidentale coupée à pic surplombe légèrement la vallée. Des degrés grossièrement taillés dans le roc permettent de le gravir, non sans peine, et de pénétrer ainsi directement de la vallée au milieu du village ; c'est le chemin, malaisé et même dangereux, mais direct, qui suivent habituellement les femmes de Siloam qui viennent remplir leurs outres à la source dite de la Vierge (*Ain Sitti Mariam, Immed-deraj*). Or ce passage et le banc de rocher dans lequel il est pratiqué sont appelés par les *fellahîn* EZ-ZEHWELÈ. Il est impossible de ne pas être frappé de l'identité absolue qu'offre ce nom avec celui de la *pierre de Zoheleth*, que la Bible (1 Rois i. 9) place près (אצל) de Aïn Rogel. Il suffit, en effet, de comparer זחלת à pour constater avec quelle précision les éléments phonétiques se correspondent. Le type vocalique lui-même est exactement reproduit, à part une interversion insignifiante du son o, qui, en hébreu, précède, et en arabe suit la consonne ח . Une transcription homogène nous présentera d'une manière encore plus nette cette identité : hébreu : ZOHELET=arabe construit : ZEHOELET.

Je crois donc pouvoir considérer l'emplacement de la pierre de Zoheleth

* This paper has already appeared in *The Athenæum*.

comme définitivement déterminé. Ce point fixé d'une façon certaine peut servir à en déterminer beaucoup d'autres du plus haut intérêt ; je ne puis aujourd'hui qu'en indiquer quelques uns, me réservant de revenir plus tard longuement sur cette question. Par exemple, il devient infiniment probable que c'est à la Fontaine de la Vierge, et non pas à *Bîr Eiyoub*, qu'il faut mettre Aïn Rogel. En effet, Bîr Eiyoub est éloigné de la Zehwèlé de près de 700 mètres, la piscine de Siloé de 400 mètres ; tandis que la Fontaine de la Vierge, située juste vis-à-vis de la Zehwèlé, n'en est séparée que par la largeur de la vallée, environ une soixantaine de mètres. Je ferai remarquer l'importance de ce résultat pour le tracé de la ligne séparative des territoires de Benjamin et de Juda qui passait par Aïn Rogel, et l'appui qu'il apporte à l'ingénieuse théorie du Capitaine Warren sur la direction de cette ligne.

Je dois relever un autre fait qui me paraît intimement lié à cette remarque et la confirmer dans une certaine mesure. On sait la multiplicité de dénominations sous lesquelles est connue la grande vallée orientale de Jérusalem, vulgairement dite *du Cédron*. Les *fellahîn* de Siloam la divisent en trois sections, qui sont, en procédant du nord au sud : 1° Wady Sitti Mariam ; 2° Wady Fer'aun ; 3° Wady Eiyoub. Le nom donné au tronçon intermédiaire qui s'étend environ depuis l'angle S.-E. du Haram jusqu'au confluent situé au N. de Bir Eiyoub, est remarquable : Wady Fer'aun, c'est à dire *la Vallée de Pharaon*. Or, l'on n'ignore pas que pour les Arabes le nom de Pharaon indique seulement l'idée d'un roi quelconque des temps anciens, et qu'on le retrouve avec cette acception vague dans une foule de localités qui n'ont rien à faire avec l'Égypte ; à peu près comme en France, tous le camps romains sont des *camps de César* pour le vulgaire. Wady Fer'aun signifie donc en réalité la *vallée du roi*, et la région à laquelle s'applique ce nom est précisément celle qu'occupaient les *Jardins du Roi* de la Bible.

Je n'ai pas le loisir d'étudier aujourd'hui, dans cette brève communication, toutes les questions topographiques qui peuvent être soulevées, et, je pense, résolues, par ces deux observations ; je me bornerai seulement à faire remarquer combien une recherche *méthodique* des noms d'endroits, conservés par la tradition indigène *genuine*, pourrait être fertile en découvertes inattendues.

Charles Clermont-Ganneau, Drogman-Chancelier du Consulat de France à Jérusalem.

TRANSLATION.

Jerusalem, Feb. 22nd, 1870.

Nearly in the centre of the line along which stretches the village of Siloam, there exists a rocky plateau surrounded by Arab buildings, which mask its true form and extent: the western face, cut perpendicularly, slightly overhangs the valley. Steps rudely cut in the rock enable one to climb it, not without difficulty, and so to penetrate directly from the valley to the midst of the village. By this road, troublesome,

and even dangerous, pass habitually the women of Siloam, who come to fill their vessels at the so-called "Virgin's Fount" (Ain Sitti Mariam, Immed-deraj). Now, this passage and the ledge of rock in which it is cut are called by the fellahîn "Ez Zehwele." It is impossible not to be struck with the absolute identity which this name offers with that of the *stone of Zoheleth*, which the Bible (1 Kings i. 9) places near (אצל) Ain Rogel. It is quite sufficient, in fact, to compare זחלת with to determine with what precision the phonetic elements correspond. The vocal type itself is exactly reproduced, putting aside an insignificant inversion of the sound *O*, which in Hebrew precedes, and in Arabic follows, the consonant ת. A homogeneous transcript will present us with this identity in still clearer manner. Hebrew: *Zohelet*; Arabic: *Zehoelet*.

I believe, then, that we can consider the situation of the stones of Zoheleth definitely determined. This point fixed with certainty can serve to determine the position of many others of the highest interest. At present I can only indicate a few, proposing to return to the question at length at some future time. For example, it becomes extremely probable that we must put *En Rogel* at the *Virgin's Fountain*, and not at *Bîr Eyub*. In fact, Bîr Eyub is 700 metres distant from Zehwèlé, and the Pool of Siloam is 400 metres; while the Virgin's Fountain, situated exactly opposite Zehwèlé, is only separated from it by the breadth of the valley, about 60 metres. I call attention to the importance of this result in tracing the line separating the territories of Benjamin and Judah, which passed by Ain Rogel, and the support which it affords to Captain Warren's ingenious theory of the direction of this line.

I must advance another fact which appears to me intimately connected with this remark, and to confirm it in a certain measure. We know the multiplicity of denominations under which the great western valley of Jerusalem, so commonly called the Kedron, is known. The fellahîn of Siloam divide it into three sections, which are, proceeding from north to south: 1st, Wady Sitti Mariam; 2nd, Wady Fer'aun; 3rd, Wady Eyub. The name of the intermediate part, which extends from the south-east angle of the Haram to the confluence at the north of Bîr Eyub, is remarkable: *Wady Fer'aun*, that is, *Pharaoh's Valley*. Now, it is well known that to the Arabs, the name of Pharaoh simply indicates the idea of something or other of ancient times, and it is formed with this vague meaning in a crowd of places which have nothing to do with Egypt, very much as in France, where all Roman camps are, for the vulgar, Cæsar's camps. Wady Fer'aun signifies, then, the *valley of the king*, and the region to which this name is applied is precisely that which the *King's Gardens* of the Bible used to occupy.

I have not the leisure to investigate in this brief communication all the topographical questions that may be raised, and, I believe, solved by these two observations. I confine myself simply to showing how a methodical search into names of places, preserved by *genuine* native tradition, may be fertile in unexpected discoveries.

CHARLES CLERMONT-GANNEAU, &c., &c., &c.

LETTERS FROM MR. E. H. PALMER.

I.

Convent of St. Catherine, Sinai,
December 31st, 1869.

We have succeeded in gaining admittance to the archbishop's apartments, in which the most valuable part of the MSS. treasures are kept, and have inspected some of the most important ones. The well-known Codex Aureus is a beautifully-written copy of the four Gospels, containing illuminated portraits of the Evangelists and other sacred personages. It is attributed to the Emperor Theodosius, the Colophon (of which a fac-simile is enclosed) giving the date, and transcriber's name in the abbreviated Uncial characters. A collation of this MS. would, doubtless, prove of great value in determining the accurate text of the Gospels, although the date, A.D. 1413, which is assigned to it, is not sufficiently remote to give it any very high authority. A person exercising *tact*, and remaining sufficiently long at the convent, might copy, and, perhaps, photograph every leaf. I have endeavoured to impress upon the monks that no other design prompts an investigation of their books than that of benefiting sacred literature by a description of the works in their possession. There are other very interesting works in the collection, amongst them an ancient copy of the Psalms in Georgian, written on papyrus, and a curious copy of the Psalms, written in a small female hand, on six small pages, but without a date. Amongst a pile of patristic and other works of no great age or interest, are some curious old Syriac books and one or two palimpsests. Our necessarily hurried visit prevented us from examining these with any great care; but they would, no doubt, well repay investigation. The proximity of the Convent to civilised parts, the frequent intercourse of the monks with European scholars and travellers, and more especially the renown of the Codex Sinaiticus, are causes that militate strongly against any chance of procuring much of bibliographical interest from Sinai, beyond the possible results of a thorough examination of the library. But we have been enabled to gather much information as to the contents of other Greek and Nestorian convents in other parts of the East, especially in one or two remote districts in North Syria, and on the confines of Armenia and Persia, from which we are very sanguine of success. If funds were provided—say not less than from £150 to £200—we will proceed, after our work in the Tîh and in Palestine is completed, to investigate those of which we have been told, and others in their neighbourhood; but as they lie so much off the beaten track, and the necessary arrangements with the Arabs and monks are so troublesome and expensive, we dare not undertake the task unless the money be remitted to us by the time of our reaching Jerusalem, in the early part of April, 1870.

E. H. Palmer.

The Convent, Mount Sinai,
December 31, 1869.

My dear Sir,—Although I have not yet reached the Tîh, the scene of my future explorations, it may interest you to hear of my movements thus far. As the direct route from Suez to Nakhl by the Hajj road is utterly devoid of interest, I deemed it best, even at the expense of a few more days' journey, to proceed thither *viâ* Sinai, in order to examine the passes and determine accurately the outline of the Tîh mountains, as well as to save the expense and inconvenience of going twice over the same ground. Making a slight deviation towards the sea-coast, we first visited the well called Bîr Abu Suweirah, and proceeded thence along Wady Amárah, in order to ascertain whether the reports that water existed there were correct or not; but we found that, besides the well above mentioned, there is not a vestige of water in the valley. This is an important point, as the supposition that water did exist there, taken in conjunction with the *sound* of the name, has led some persons to identify this spot with the "Márah" of Scripture. Leaving Wady Amárah, we followed Wady Gharundel up to its head, where I commenced a careful route-sketch of Wady Wutáh, assisted by Mr. C. F. Tyrwhitt Drake, who accompanies me as the representative of the University of Cambridge, for the purpose of making natural history researches. The part thus surveyed will complete—with that piece of country through which we shall enter the Tîh—the survey of the Peninsula of Sinai immediately south of the Tîh, and, as we shall have examined the other roads and passes, will determine the accurate outline of the mountains which form its boundary. It will, therefore, be unnecessary to spend time in retracing my steps from Nakhl southwards, and I shall have more leisure for the exploration of the unknown and more interesting portions of the country.

I hope to reach Nakhl in another fortnight, as I shall stop on my way to examine the passes of Ereikhem, Wursáh, &c., and to trace the course of Wady Zellegah, and the connection, if any, between El 'Ain el Elyá and 'Ain Hudhera. I leave for the latter to-morrow morning.

I will write again from Nakhl at the first opportunity, and enclose a tracing of the route-sketch already made—the correct outline of the Tîh range—and the results of my work up to that point.

I have already established a depôt at Nakhl, having procured a letter to the governor there. I have forwarded two months' provisions by an Arab, and have written an Arabic letter of instructions myself, which I have sent with them.

Our mode of travelling is not cumbersome; four camels carry all our tents, camp furniture, and a months' provisions; and we have one dromedary between us, which, however, is seldom used for anything but the instruments and sketching materials. Having no servants but an old Arab, who was with me last year and has already been for two successive years with Mr. Holland, we can get over the ground quickly and easily. My sheikh is a great friend of the Teáhah Arabs, and, from his account of them, I anticipate no difficulty in carrying out my investiga-

tions. It seems likely, from what I have heard from the Arabs, that many Scripture names may be recovered in the wilderness of the Tîh; for example, I have already found that the mountain set down in the maps as J. Thellah is called J. Dhallel—a word which, like the name Tîh itself, signifies "going astray," and which I believe can refer to nothing but the wanderings of the Israelites. However, when I see more of the country I shall be able to write more fully.

For the present, I remain, yours very truly,

H. E. PALMER.

II.

Cala'at Nakhl, The Tih,
January 19th, 1870.

SINCE my last letter, dated from the Convent of Mount Sinai, I have reached the point from which my exploration of the interior region of the Tîh commences. By entering the country from the Sinaitic side, I have not only saved much of the time which would have been consumed in proceeding southward from Nakhl and returning over the same ground, but have been enabled to investigate the general outline of the mountains which form the edge of the Tîh plateau, and to clear up several doubtful points respecting the geography of the north-eastern corner of the Sinaitic Peninsula. From Jebel Musa we proceeded to 'Ain Hudherah, examining on our way the curious remains at Erweis el Ebeirig, the head of Wady Saal, which as I have said in a former notice of my visit last year, I believed to be the vestiges of an Israelitish camp. A second and more careful inspection of the spot has fully confirmed my previous opinion. The situation is a most commanding one, and the hill-sides and more elevated portions of the water-shed are covered for more than a mile in every direction with curiously arranged stones, evidently the remains of a large encampment; but differing essentially from any others that I have seen in the country, whether Arab or otherwise. The larger inclosures occupied by the more important personages, the hearths or fireplaces, &c., are still distinctly to be traced. At some distance are large heaps of stones, obviously burials without the camp; and a conspicuous stone erection on the hill to the right hand is surrounded by a regular series of smaller heaps, different, however, from the rest in their order and construction. The extent of the remains, indicating the assemblage of an unusually large concourse of people; the distance from Sinai on the one hand and 'Ain Hudherah (the probable site of Hazeroth) on the other; and above all, the curious story of the lost Hajj caravan, all tend to confirm the supposition that we have here really a vestige of the Exodus.

Our next object was to determine the connection, if any, between 'Ain Hudherah and el 'Ain el 'Elyá. We found that a communication does exist between them; but the road is impassable for camels; but as there was also another road beside the one already known, we determined to follow it and approach Jebel el 'Ejmeh (the point at which we intended to enter the Tîh) from that direction. The enclosed tracing of the route sketch will show our course and the nature of the country through which

we passed, and will, I trust, prove of interest in a geographical point of view.

Near el 'Ain el 'Elyá we discovered some very interesting remains, (*nawámís*) similar in character to those described by Mr. Holland and investigated last year by the Sinai expedition; but in a much more perfect state of preservation than any others which we had seen in the country. The word *námús*, plural *nawámís*, signifies mosquitoes, and is applied by the Towarah Arabs to any kind of stone hut, the origin of which is unknown to them, from the tradition which exists amongst them, that they were built by the children of Israel for a protection against the plague of mosquitoes sent by Heaven as a chastisement for their rebellion and sins. The other Arab tribes do not know the name, and call them merely *gusúr* or castles.

These nawámís in question are similar in construction to those at the head of Wady Hebrán; but as they have remained for the most part undisturbed, their character and use can be more distinctly ascertained. Several human bones were found in a small cist in the centre; but from the size of this, and the fact that the bones in no case indicated the presence of a perfect skeleton, it was at once apparent that they were not tombs, but, as every feature of the building suggested, human dwellings. Beside the cist or store above mentioned, there was in each case a small hearth, and in these, ashes and pieces of charred bone were found. There are more than sixty others around those which we examined; all of them, however, more or less imperfect; and it would seem that the neighbourhood of el' Ain el 'Elyá once contained a large colony of their inhabitants.

From this point we travelled up Wady Biyár to Jebel el 'Ejmeh. This wady is so called from the wells *(Bi-ár)* which exist near its head, and which in their form and use remarkably illustrate the passage in Genesis xxix. 7—9: "Till they roll the stones from the well's mouth, then we water the sheep." The water in them is very bad, being strongly impregnated with a medicinal salt; and as there was no other watering-place on our road between this and Nakhl, we suffered considerable inconvenience from it. The head of this valley also contains some most interesting ruins, stone circles, and heaps similar to the tombs at Jebel el Hadíd and at the mouth of the Nagb Hawa, and at a short distance from them the remains of a large city, to which the cemetery was evidently attached. The enclosed sketches, made to scale by Mr. Tyrwhitt Drake, both of the nawámís already mentioned, and of these ruins, will give a better idea of their appearance and arrangement than any description could convey.

We next crossed Jebel el 'Ejmeh by a pass called Nagb el Mírád, the existence of which has not before been made known, and from thence ascended the highest point of the mountain. Observations taken from here, and at various other places on our journey, have enabled us to define the outline of the Tíh range, and to mark correctly upon the map the various passes by which it may be entered. (The reading of the hypsometer on the summit was 204.10; thermometer, 51; aneroid No. 1, 26.37; do. No. 2, 25.01.)

The name *'Ejmeh* I believe to be an Arabic corruption, or rather, adaptation of the Hebrew word *Iïm* (as in *Ije-Abarim*), "low hills or tumuli," a description which would exactly apply to the country which meets the eye on reaching the top of the pass, and through which the journey for the first two days lies. A glance at the route-sketch will show one or two names, such as Jebel 'Arádeh, &c., which would suggest some of those mentioned in the list in Numbers xxxiii.; but without the Hebrew text before me, I do not like to venture upon any attempt at identification.

At Ain Hudherah we left the country of the Towarah Arabs, and came successively amongst the Emzaineh, Haiwátt, Terábín, and Taiyáhah tribes. These appear to be in a descending scale of ignorance and superstition, and the one prevalent idea amongst them is that we have come for the express purpose of cutting off their supply of rain. All our attempts to disclaim either the power or the wish are treated with open and avowed incredulity. At first this occasioned us no trouble, as they seemed rather disposed to propitiate us on that account, but it has on several occasions proved a source of great annoyance and inconvenience.

We have at last come to an understanding with the Taiyáhah, who have agreed to take us all over their country and subsequently to hand us over to the sheikh of the Dhahariyeh, the northern district of the mountains lying between Beersheba and Wady Marreh.

These arrangements were not concluded without considerable trouble, and, indeed, some risk; and two days were consumed in noisy altercation, and in resisting their attempts at extortion and intimidation.

The greatest caution and firmness are necessary in dealing with them, and every point is contested with equal obstinacy on both sides. Having at last signed and sealed the contract with them, we have no hesitation in committing ourselves to their good faith; but poor old Sálem, our Arab attendant, was so much impressed that he forthwith decamped to his own more peaceful mountains, and we accordingly have the additional trouble of cooking, washing, &c., thrown on our own hands.

The country is now peacable, the war which recently raged between the Taiyáhah and the Terábin being now at an end; but the 'Azázimeh tribes, occupying the country between El 'Aujeh and Beersheba, still present some difficulty.

By exercising proper caution, and by a skilful application of *backshish*, we shall, I have no doubt, be able to visit these interesting relics as well. The Taiyáheh say that we are not like any other travellers; and I fancy our camp appointments justify the remark. But we tell them that, as that is the case, we do not intend to allow ourselves to be hurried through as other travellers are.

The prevailing opinion at the fort is that we are harmless lunatics, and the four soldiers who are appointed to guard our tent while we remain upon the Hajj road regard us with mingled alarm and curiosity.

I have already ascertained much that is of importance with reference to the unexplored parts of the district, into which we are now on the

eve of starting. This, should it prove correct, with what we have already ourselves observed, will show I fear that the accuracy of former maps and accounts will not prove very great; but I prefer leaving this subject to a later report.

As we are already acquainted with the plains, and the course of Wady el'Arish and other valleys, we shall first examine the southernmost parts of the mountainous region which lie immediately within the limits of the Tiyáhah country; thence we shall proceed northward to Beersheba, making detours to the ruined cities in the 'Azázimeh district, and descend by Tell Arad into the Dhahariyeh north of Wady Marrah. The examination of these will occupy the rest of our stay in the Tih, which we shall leave by way of Wady Musa. Although I shall, I trust, have then completed the objects for which the grant was made me from the Palestine Exploration Fund, I, as well as my companion, Mr. Tyrwhitt Drake, will endeavour to gather as much information as possible in the course of our journey thence to Jerusalem by the north-east of the Dead Sea. I cannot conclude without expressing my sense of the great value of Mr. Drake's hearty co-operation in forwarding the objects of the expedition. Should the Committee of the Fund be disposed to make a further grant for the purpose of continuing our investigations in Jerusalem and Palestine, I shall be obliged by their paying in the amount to my bankers, Messrs. Foster and Sons, Cambridge, in order that I may draw the necessary amount for my journey on my arrival at Jerusalem.

E. H. Palmer.

ARABIC GLOSSARY.

The subjoined short Glossary, which has been asked for by several subscribers, is extracted from the "Handbook for Syria and Palestine," by the kind permission of Mr. Murray:—

Abu, father.
'Ain, pl. *'Ayûn*, fountain.
Ard, plain.
Bâb, door; gate.
Bahr, sea.
Balad, village.
Bakshîsh, present.
Beit, pl. *Buyût*, house.
Belâd, district.
Bint, pl. *Beadb*, daughter.
Bîr, well.
Birkeh, pl. *Burâk*, pool.
Deir, convent.
Emîr, pl. *Umarâ*, prince.
Ibn, pl. *Beni*, son
Jâmi'a, mosque.
Jebel, pl. *Jibâl*, mountain.
Jisr, bridge.
Ka'a, plain.
Kabr, pl. *Kubûr*, sepulchre.
Kâdy, judge.
Kefr, village.
Khân, caravansary.
Khurbeh, ruin.
Kubbeh, dome.
Kurn, pl. *Kurun*, horn.
Kul'ah, castle.
Kusr, castle.
Mâr, saint.
Merj, pl. *Murûj*, meadow.
Mihrâb, prayer niche.
Nahr, pl. *Anhur*, river.
Nakhleh, pl. *Nukhl*, palm-tree.
Neby, prophet.
Neb'a, fountain.
Nukb, pass.
Râs, head; cape.
Sheikh, pl. *Shuyûkh*, chief.
Tarbûsh, fez; cap.
Tell, pl. *Tulûl*, dim. *Tuleil*, hill.
Tîn, fig.
Turfa, tamarisk.
Umm, mother.
Wâdy, valley; watercourse.
Wely, saint's tomb.

Results of Meteorological Observations taken at NAZARETH, GAZA, JAFFA, and BEYROUT.

Name of Station and Observer.	Year and Month.	Barometer. 9 a.m. and noon.				Temperature of Air in Month, 9 a.m.						Approx. Mean Temperature from Maximum and Minimum.	Mean temp. at 9 a.m.			Vapour.			Mean Degree of Humidity. Saturation=100.	Mean Weight of a Cubic Foot of Air.	Wind.					Rain.	
									Mean.							Elastic Force.	In a Cubic Foot of Air.				Estimated Strength.	Relative proportion of.				Number of Days it fell.	Amount collected.
		Highest reading.	Lowest reading.	Monthly range.	Mean reduced to 32°.	Highest.	Lowest.	Monthly Range.	Of all Highest.	Of all Lowest.	Daily Range.		Dry Bulb.	Wet Bulb.	Dew Point.		Mean.	Short of Saturation.				North.	East.	South.	West.		
	1869.	in.	in.	in.	in.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	in.	grs.	grs.		grs.							in.
NAZARETH, SYRIA. Dr. P. K. Varton.	July.	—	—	—	—	95·0	64·4	30·6	86·2	64·8	21·4	75·5	75·4	69·8	65·8	·635	6·8	2·7	72	—	—	3	0	8	20	0	0·00
	Aug.	—	—	—	—	97·1	65·4	31·7	89·3	67·6	21·7	78·5	78·2	71·8	67·3	·668	7·2	3·2	70	—	—	5	2	3	21	0	0·00
	Sept.	—	—	—	—	97·0	59·5	37·5	86·8	65·1	21·7	76·0	75·5	68·2	63·0	·575	6·2	3·3	65	—	—	6	1	6	17	1	0·24
GAZA, SYRIA. Messrs. Nimmo, Pickard, and Cheetham.	Aug.	—	—	0·295	29·783	90·5	66·0	24·5	86·9	70·6	16·3	78·8	82·5	79·1	76·8	·920	9·8	2·0	83	505	—	11	0	3	17	0	0·00
	Sept.	—	—	0·260	29·856	90·0	62·5	27·5	84·6	67·8	16·8	76·2	80·8	76·5	73·6	·829	8·9	2·4	79	508	—	11	1	4	14	0	0·00
JAFFA, SYRIA. H. A. Kayat, Esq.	Sept.	—	—	0·160	28·645	91·5	61·0	30·5	85·7	66·2	19·5	76·0	81·8	78·3	76·0	·897	9 5	2·1	83	486	—	—	—	—	—	1	0·25
BEYROUT, SYRIA. G. J. Eldridge, Esq.	Dec.	30·220	29·660	0·560	29·937	68·5	51·5	17·0	63·2	55·6	7·6	59·4	59·4	54·9	50·9	·373	4·2	1·5	74	533	0·8	2	5	24	0	9	2·21
	1870. Jan.	30·150	29·700	0·450	29·831	69·0	52·0	17·0	62·8	56·0	6·8	59·4	59·4	54·6	50·3	·365	4·1	1·6	72	532	0·9	5	4	17	5	11	4·77

N.B.—The values given for Beyrout are the means deduced from Observations taken at 9 a.m. and 10 p.m.

BEYROUT.—December 9th—*Lightning* and *heavy squalls* during evening.
10th—*Heavy squalls* all night, with hail.
12th—*Snow* on mountains down to about 4,500 feet.
16th—*Rain squalls* from north at 5 p.m.
19th—*Sirocco, thunder and lightning* at 3.30 p.m. followed by rain.
20th—Strong winds with heavy squalls all preceding night (19th-20th).
January 7th—*Lightning* to N.W.
13th—*Lunar Halo* seen.
14th—*Lunar Halo* seen, cloud banks to E.
22nd—*Lightning* from 10 p.m., with thunder and rain.
25th—*Sirocco* during day. Hail and thunder during the evening.
27th—*Sirocco*. Air filled with fine sand.
28th—*Rained* all day. Heavy squalls on preceding night (27th-28th.)
30th—Waterspouts seen. Heavy showers about noon.

JAMES GLAISHER.

TREASURER'S STATEMENT.

Appended will be found the balance-sheet, showing the receipts and expenditure of the Palestine Exploration Fund for the year ending December 31, 1869. A few words of explanation to prevent any misunderstanding may be useful.

The Committee have two main sources of income: donations, and collections at lectures. From the former the sum of £3,010 has been received during the year; from the latter the sum of £464. It is necessary to add, however, that the latter item includes a large number of donations paid on the spot. And the sum (£464) entered in the balance-sheet represents, not the *gross*,* but the *net* proceeds of lectures. The cost of working these lectures is very great, and it is very much to be wished that promoters of them would remember the great saving that may be effected by procuring the room free of expense, and keeping down the expense of advertising and printing. The sum of £48 has been received by the sale of publications; while £223 has been spent on printing them. This, however, is due to the fact that *every subscriber*, save those whose address the Secretary has not been able to ascertain, is presented with a copy of the *Quarterly*. Upwards of 12,000 have thus been distributed, at a cost, in postage alone, of £50 to the subscribers of the Fund. The Photographs show a balance against the Fund. This is, however, because the agents' returns were not all in by the end of the year.

The expenses may be thus classified:—

Exploration, including all spent on the party now in Jerusalem	£2,424	15	2
Exhibition	22	19	1
On Subscribers, including printing, lithographing, and reporting, and postage of reports	442	18	6
Advertising	100	16	9
Management, including salaries, rent, postage, office expenses, and legal advice	509	19	0

In other words, the whole expenditure due to exploration is ·692 of the whole; that due to reports, &c., given to subscribers, is ·126; while that due to management is ·145.

The Exhibition account shows a balance on the other side. This is because the Photographs sold there have been removed to the Photograph account. It as nearly as possible paid its own expenses. Indirectly, that is, as helping to show what has been done, it is believed that it considerably more than paid its expenses.

* The gross receipts under this head were £841 0s. 9d.

Dr. BALANCE SHEET,

1869.		£	s.	d.
Dec. 31.	To Donations and Subscriptions	3010	16	2
,,	Sale of Publications	48	0	6
,,	Proceeds of Lectures.....	464	18	8
Jan. 1.	Photographs, balance of cost of Stock	242	1	10
Dec. 31.	Sundry unpaid Accounts	410	3	4
		£4176	0	6

DECEMBER 31, 1869. *Cr.*

1869.		£	s.	d.
Jan. 1.	By Sundry unpaid Accounts.. ..... £333 2 5			
	Less balance in Banks 248 3 11			
		84	18	6
Dec. 31.	Exploration Expenses	2424	15	2
,,	Photographs, balance of cost of Stock in hand ...	270	16	2
,,	Exhibition at Dudley Gallery, balance	14	14	1
,,	Exhibition at Manchester	8	5	9
,,	Management :—			
	Rent	78	0	0
	Salaries.....	267	10	0
	Printing	223	2	9
	Lithographing	153	19	1
	Advertising	100	16	9
	Stationery	51	18	10
	Reporting.....	15	16	8
	Furniture	1	10	11
	Bank stamps	0	1	0
	Law expenses	6	0	0
,,	Postage and parcels	123	15	6
,,	Petty Cash and sundry Office Expenses.....	31	2	9
		3857	3	2
	Balance.....	318	17	4
		£4176	0	6

W. MORRISON, *Hon. Treasurer.*

LIST OF SUBSCRIPTIONS.

DEC. 25TH, 1869, TO MAR. 24TH, 1870.

a denotes Annual Subscriber.

*** If any omission or mistake be observed in the following lists, the Secretary will be very glad to be informed of it, and will rectify the error in the next *Quarterly Statement*.

	£	s.	d.
W. H. Burbidge, Esq.	5	0	0
Per B. Gledhill, Esq.	0	5	0
— Walker, Esq.	1	0	0
*a*W. Windley, Esq.	2	2	0
Per Miss Alexander	4	7	6
F. G. Osmond, Esq.	0	5	6
*a*Mrs. Clendenning	1	1	0
*a*Rev. T. B. Harrison, jun.	1	0	0
*a*Miss Emmett	1	0	0
*a*Mr. Hancock	1	1	0
*a*Miss Grove	0	10	6
*a*Rev. E. N. Serjeant	1	0	0
*a*Gen. Nuthall	1	0	0
E. M. Ward, Esq.	2	2	0
*a*Rev. F. W. Holland	1	1	0
*a*Rev. J. Hewetson	1	0	0
Rev. W. Hodgson	20	0	0
The Dean of St. Paul's	2	2	0
*a*Rev. F. C. Autridge	1	1	0
— Merrick, Esq.	1	14	0
Per Mrs. Hodgson	1	5	4
*a*Rev. Vernon Musgrave	1	0	0
*a*Rev. R. E. Coplestone	0	10	0
*a*E. McMurdo, Esq.	1	1	0
Mrs. Trigg	0	1	0
*a*Rev. T. Blackburne	2	0	0
*a*Rev. W. H. Davey	1	1	0
"Friends," per M. J.	5	5	0
*a*T. G. Keele, Esq.	0	10	0
*a*J. McKinnell, Esq.	1	1	0
*a*W. Harrison, Esq.	2	2	0
*a*W. R. Spicer, Esq.	5	0	0
*a*John Ruskin, Esq.	10	0	0
Abel Smith, Esq., M.P.	5	5	0
Per Mrs. Alexander	2	2	0
*a*J. Horniman, Esq.	1	1	0
S. S. Union	2	2	0
Prov. G. Lodge, N. and E. Riding of Yorkshire	10	10	0
Miss E. R. Allport	2	2	0
*a*G. D. W. Digby, Esq.	10	0	0
W. Clark, Esq.	1	0	0
Miss E. T. Martin	0	10	0
Mrs. Hester Fenwick	1	1	0
B. Shaw, Esq.	5	0	0
Per Rev. F. W. Holland	3	1	7
Christian World List	0	10	0
*a*Rev. G. Christian	1	1	0
*a*Mrs. Hancock	1	1	0
*a*J. P. Bacon, Esq.	5	0	0
R. Brown, Esq.	0	10	0
Rev. J. B. Harrison	5	0	0
*a*V. A. Williamson, Esq.	1	1	0
A. Henderson, Esq.	0	10	6
Major Ditmas	0	10	0
*a*T. Chapman, Esq.	1	1	0
Major H. J. Hare	2	0	0
Octavius Wigram, Esq.	5	0	0
*a*William Sanby, Esq.	1	1	0
Per Mrs. Willson	0	14	6
Rev. H. O. Harper	9	9	0
*a*Admiral Aldham	1	0	0
Miss Ann Stock (£1 1s. *a.*)	5	1	0
Rev. W. H. Gamlen	5	0	0
Miss C. H. Martin	1	0	0
*a*Rev. H. J. Sharpe	0	10	6
*a*Miss Wood	1	0	0
C. James Pocock, Esq. (£1 1s. *a*)	6	1	0
*a*P. D. Tuckett, Esq.	1	1	0
A. M. Touch, Esq.	0	3	0
Mr. W. Sweetman	0	10	0
Per T. M. Wearing, Esq.	0	10	1
*a*Lieut. W. Warren	2	0	0
*a*Ernest Pewtress, Esq.	1	1	0
*a*Miss Robson	1	1	0
*a*Rev. Melsup Hill	1	1	0
Miss Willshen	0	10	0
*a*Miss Beaufort	1	1	0
D. Hembury, Esq.	2	2	0
*a*Miss Brooks	1	1	0
Rev J. Barton (*a* £1 1s.)	2	2	0
Mrs. Charles Thring	0	10	0
Major Clarke	1	1	0
Mrs. Muir Ormslie	0	10	0
*a*Rev. Edmund Field	1	1	0
*a*A. Rae Martin, Esq.	1	1	0
Miss Thomson	0	5	0
H. S. Mitchell, Esq.	1	1	0
— Goodrich, Esq.	0	2	6
Lord C. A. Hervey	1	1	0
F. M. Sir W. Gomm, G.C.B.	5	0	0
A. M. Drummond, Esq.	2	2	0

	£	s.	d.
Rev. Richmond Powell	0	10	6
O. Browne, Esq.	2	0	0
G. C. Courthope, Esq.	1	1	0
*a*S. H. Hodgson, Esq.	1	1	0
*a*L. Jaques, Esq.	1	1	0
*a*Miss Lockwood	1	1	0
General Clark	3	0	0
*a*A. Townsend, Esq.	1	1	0
*a*Miss Martin	0	10	0
*a*Rev. Charles Potchett	1	1	0
*a*Miss Weeks	1	1	0
Miss Hornidge	1	5	0
*a*George Hebden, Esq.	0	5	0
*a*J. O. Church, Esq.	1	1	0
Mrs. Buchanan	1	1	0
*a*E. Nuth, Esq.	1	1	0
R. Holloway, Esq.	1	1	0
*a*Dr. Jackson	1	1	0
*a*Crozer Theological Seminary, Chester Pa. U.S.A.	0	10	6
*a*J. C. Mellis, Esq.	0	10	6
Rev. L. Roger (10s. *a*)	1	0	0
*a*Miss M. Clode	1	1	0
*a*Dixon Robinson, Esq.	1	1	0
*a*Rev. T. Rigaud	0	10	0
*a*Ven. Archdeacon Parry	1	1	0
*a*Rev. L. G. C. Cure	2	0	0
*a*J. Austin, Esq.	2	2	0
*a*W. Butler, Esq.	0	5	0
*a*Rev. J. W. Weare	1	1	0
*a*Miss S. Lane	0	10	6
*a*Rev. J. C. Harrison	1	1	0
Mr. Marnock	3	3	0
*a*Rev. J. Brooke	1	0	0
*a*Miss Brooke	0	10	0
E. C. Wade, Esq.	2	0	0
Rev. J. H. Moore	1	0	0
Dr. Fraser	1	1	0
*a*G. R. Gordon, Esq.	3	0	0
Miss Baxter of Ellangowan	20	0	0
*a*John Ruskin, Esq.	10	0	0
Rev. C. Whately	2	2	0
*a*W. J. Peebles, Esq.	1	1	0
*a*Rev. John Compton	1	1	0
Rev. Joseph Lyon	5	0	0
*a*E. S. Wykes, Esq.	1	1	0
*a*Rev. W. J. Lawrence	0	10	0
*a*Rev. A. Gray	0	10	0
*a*J. Simpson, Esq.	0	5	0
*a*Rev. J. H. Moorhouse	1	0	0
*a*Mrs. O'Brien	1	0	0
J. P. Gilliat, Esq.	10	10	0
*a*J. Kirkpatrick	1	2	0
*a*Miss H. Jane Kelly	0	2	6
*a*Rev. W. Bilton	2	0	0
*a*Rev. W. W. Dickenson	1	1	0
*a*Miss Dickenson	0	10	0
*a*Major Montague	1	1	0
*a*Rev. L. R. Ayre	2	2	0
*a*Miss Buxton (2nd Donation)	5	5	0
Cecil Monro, Esq.	5	0	0
*a*B. J. Willats, Esq.	1	1	0
*a*B. E. Thomson, Esq.	0	10	0
*a*R. B. Annesley, Esq.	1	1	0
*a*A. Sloper, Esq.	0	5	0
*a*Mrs. Bonham	0	2	6
Lady Henrietta Pelham (2nd Donation)	5	0	0
Herbert Jones, Esq.	1	1	0
F. Puckridge, Esq.	2	2	0
*a*Miss Taprell	1	1	0
Per Rev. J. Moorhouse	1	16	0
*a*Rev. R. Allen	1	1	0
*a*Rev. J. Oswald Dykes	1	1	0
*a*G. H. Lawrence, Esq.	1	1	0
*a*Mrs. Boott	1	1	0
*a*Miss Amelia Hunter	1	0	0
*a*Rev. W. Stone	0	10	6
Sir G. Baker (2nd Donation)	5	0	0
*a*Rev. W. F. Kerr	1	1	0
A. F. Govett, Esq.	10	10	0
*a*Rev. E. R. Orger	0	10	0
*a*D. S. Morice, Esq.	1	1	0
Rev. Dr. H. Bedford Hall	5	5	0
*a*J. Anstey, Esq.	1	1	0
*a*Rev. C. W. Lohr	0	2	6
*a*Rev. W. J. Packe	1	1	0
Hon. Otway Toler (3rd Don.)	1	0	0
Messrs. J. and Horatius Bonar	2	2	0
*a*W. R. Davies, Esq.	0	10	0
*a*G. B. Crewdson, Esq.	1	1	0
*a*Rev. Canon Hall	1	0	0
Miss W. E. Forster	5	0	0
Mrs. Cunliffe (2nd Donation)	10	0	0
Rev. Dr. William Lee	3	3	0
*a*F. Winter, Esq.	0	5	0
*a*H. Newton, Esq.	0	5	0
*a*J. W. Baines, Esq.	1	1	0
*a*Island of Arran	0	2	6
Per Rev. H. A. Jukes	2	5	10
*a*E. Adamson, Esq., M.D.	4	4	0
Per Miss W.	1	1	0
Per Miss Howorth and Miss Stamer	7	16	6
Rev. H. Houghton	1	1	0
*a*Hon. and Rev. Lowther Barrington	1	1	0
*a*Rev. W. Griffiths	1	1	0
Rev. J. W. Bardsley	2	2	0
Sir Hope Grant	5	0	0
Per Mrs. Sibley	1	1	0
*a*R. W. Hollon, Esq.	1	1	0
*a*J. Hollings, Esq.	1	1	0
*a*Rev. J. Dalton	1	1	0
*a*S. Pollard, Esq.	1	1	0
Per Rev. Gordon Calthrop	2	0	0
Sunday School Teachers, Sowerby	1	1	0

	£	s.	d.
*a*Miss Denison	1	1	0
*a*W. Appleford	0	10	6
Per Capt. Moody, Nova Scotia	12	1	6
*a*Lieut. A. E. W. Goldsmid	1	0	0
*a*J. S. Parker, Esq.	1	1	0
*a*Rev. W. Saumarez Smith	1	10	0
Mrs. Child	2	5	0
*a*G. H. Scott, Esq. (£1 1s. *a*)	5	0	0
J. Fennell, Esq.	1	1	0
*a*Rev. W. S. Fowler	1	1	0
*a*Rev. H. F. Brock	0	10	6
*a*W. Bethell, Esq., jun.	1	1	0
*a*Rev. F. F. Lambert	0	10	6
*a*Miss M. A. Shillito	0	10	6
*a*Thos. Oxley, Esq.	0	10	6
*a*Rev. E. S. Proud	0	10	6
*a*J. G. Carlill, Esq.	1	1	0
*a*G. T. Grant, Esq.	0	10	6
a— Turnbull, Esq.	0	10	0
*a*Rev. Robert Balgarnie	0	10	0
*a*Rev. J. Acworth, LL.D.	0	10	0
*a*W. Rowntree, Esq.	0	10	0
*a*J. Leekenby, Esq., F.G.S.	0	10	0
*a*Messrs. Stuart and Gregson	1	1	0
*a*T. G. Johnson, Esq.	1	1	0
*a*W. Roberts, E q.	1	1	0
*a*James Wood, Esq.	2	2	0
*a*John Lloyd, Esq.	0	10	6
*a*John Lewis, Esq.	1	1	0
*a*John Roberts, Esq.	1	1	0
*a*Mr. Geo. Hardman	0	5	0
*a*Reuben Spencer, Esq.	1	1	0
*a*James Hoy, Esq.	1	1	0
*a*C. Edwards, Esq.	1	1	0
*a*Mrs. Mirrielees	1	1	0
*a*Miss Daw	0	10	6
*a*Rev. Prof. H. R. Reynolds, D.D.	1	1	0
*a*J. Harris Heal, Esq.	1	1	0
*a*Francis Ford, Esq.	1	1	0
*a*J. Harvey, Esq.	0	10	0
*a*W. Coats, Esq.	1	1	0
*a*W. H. Thomas, Esq.	1	1	0
*a*W. M. Hitchcock, Esq.	2	2	0
*a*John Thomson, Esq.	1	1	0
*a*Miss Smith	1	1	0
*a*J. Faulding	1	1	0
*a*J. Coxeter, Esq.	1	0	0
*a*Rev. S. A. Tipple	1	1	0
*a*H. Robinson, Esq.	1	1	0
*a*James Bell, Esq.	1	1	0
*a*J. A. Russell, Esq.	1	1	0
*a*T. Fuller Carter, Esq.	1	1	0
*a*G. W. Dodds, Esq.	1	0	0
*a*Joseph Burgess, Esq.	0	10	6
*a*H. T. Bailey, Esq.	1	1	0
*a*Rev. H. Mackennal, B.A.	1	1	0
*a*Samuel Ranyard, Esq.	2	2	0
*a*John Le Mare, Esq.	1	1	0
*a*A. Jennings, Esq.	1	1	0
*a*J. L. Budden, Esq.	1	1	0
*a*A. Goodall, Esq.	1	1	0
*a*James Benham, Esq.	1	1	0
*a*Thos. P. Price, Esq.	1	1	0
*a*S. Harris, Esq.	0	10	6
*a*Charles Angus, Esq.	0	10	0
*a*Mr. W. Beare	0	2	6
*a*J. L. Bennet, Esq.	1	1	0
*a*James Macdonald, Esq.	1	1	0
*a*J. M. Grant, Esq.	1	1	0
*a*Mrs. Rippon	1	1	0
*a*John Laing, Esq.	1	1	0
*a*Lewis Stewart, Esq.	1	1	0
a— Engall, Esq.	1	1	0
*a*Miss Lindsay	1	1	0
*a*James Grant, Esq.	1	1	0
*a*James Watson, Esq.	1	1	0
*a*J. M. Leitch, Esq.	1	1	0
*a*Andrew Wark, Esq. (*a* £1 1s.)	2	2	0
*a*R. T. Turnbull, Esq.	1	1	0
*a*Miss Hanton	0	5	0
*a*W. Clarke, Esq.	1	1	0
*a*W. R. Garwood, Esq.	1	1	0
*a*Mrs. James Allan	1	1	0
*a*Alfred Melluish	1	1	0
*a*N. Barnaby, Esq.	1	1	0
*a*Ernest Pewtress, Esq.	1	1	0
*a*J. Cooper, Esq.	1	1	0
*a*Alfred Dunn, Esq.	1	1	0
*a*J. Gill, Esq.	0	10	6
*a*Rev. H. Allon	1	1	0
*a*Thos. Halliburton	1	0	0
*a*W. Foster, Esq.	1	0	0
*a*Rev. G. B. Watson	1	1	0
*a*Rev. F. Bathurst	1	0	0
*a*Mrs. Bathurst	1	0	0
*a*B. Margetts, Esq.	1	0	0
*a*E. McMurdo, Esq.	1	1	0
*a*Rev. R. E. Coplestone	0	10	0
*a*Rev. C. Deedes	0	10	0
*a*Rev. L. Deedes	0	10	6
*a*Rev. T. Woodward	0	5	0
*a*C. Hill, Esq.	1	1	0
Rev. Barclay Bevan	5	0	0
*a*W. M. Armstrong, Esq.	0	5	0
Robert Smith, Esq.	5	0	0
*a*Rev. J. H. Carr	0	5	0
*a*Mrs. Carr	0	5	0
*a*Miss S. Hart	0	5	0
Mrs. Crampton	0	12	6
Rev. E. Spooner	0	5	0
*a*Rev. George Bailey	0	10	6
*a*Major Ditmas	0	10	0
*a*Mrs. Chas. Thring	0	10	0
*a*Major Clark	1	1	0
*a*A. Rae Martin, Esq.	1	1	0
General Clark	3	0	0
*a*Alex. Townsend, Esq.	1	1	0
*a*Miss Martin	0	10	0

	£	s.	d.
*a*Mrs. Grant	1	1	0
*a*Mrs. F. Potts	1	1	0
*a*E. S. Wyles, Esq.	1	1	0
*a*Rev. W. J. Lawrence	0	10	0
*a*Rev. A. Gray	0	10	0
J. S. Gilliat, Esq.	10	10	0
*a*Rev. J. H. Moorhouse	1	0	0
*a*Mrs. O'Brien	1	0	0
*a*Rev. E. Orger	0	10	0
W. S. Morris, Esq.	1	1	0
J. Campbell, Esq.	1	5	0
R. Napier, Esq.	10	0	0
Anonymous (at lecture at Edinburgh by Rev. H. Geary)	0	5	0

LOCAL ASSOCIATIONS.

ALDERSHOT.

Hon. Sec.—Rev. J. E. Sabin.

Proceeds of Lecture by the Rev. Henry Geary, Jan. 20—			
Collection at doors	3	0	6
Sale of Publications	0	16	0

ALEXANDRIA.

Hon. Sec.—Rev. D. Wright.

Proceeds of Lecture by the Rev. Henry Geary, March 10, 1870—			
Collection at doors	2	12	2
Donation—			
J. Campbell, Esq.	1	5	0

BASINGSTOKE.

Hon. Sec.—Rev. W. Marriner.

Proceeds of Lecture by the Rev. Henry Geary, Jan. 19—			
Collection at doors	4	19	4
Sale of Publications	0	6	0

BEDFORD.

Hon. Sec.—E. W. Ransom, Esq.

Collection	4	5	10
G. E. Beaty Pownall, Esq.	3	0	0
*a*J. W. Foster, Esq.	1	1	0
*a*J. Tucker, Esq.	1	1	0

BRADFORD.

Hon. Sec.—Rev. W. Dyson.

*a*John Rand, Esq.	5	0	0
*a*E. Hailstone, Esq.	2	0	0
*a*J. Thornton	1	0	0
*a*Rev. T. H. Flynn	0	10	6
*a*Rev. J. W. Loosemore	0	10	6
*a*Rev. H. P. Dawson	0	10	6
*a*Rev. J. Holme	1	1	0
*a*Mrs. H. O. Mawson	0	10	0
*a*James Smith—Sale of tickets	1	5	0
*a*Rev. Knight Gale	0	5	0
*a*Rev. E. Mercer	0	10	6
*a*William Watkins, Esq.	0	5	0
*a*William Brayshaw, Esq.	0	2	
*a*William Milnes, Esq.	0	5	
*a*Rev. W. Dyson	0	1	

BRIGHTON.

Hon. Sec.—Rev. D. Winham.

Miss M. Ridding	5	0	0
Miss Tufnell	1	0	0

BIRKENHEAD.

Hon. Sec.—Ed. Rae, Esq.

March 18—			
Cash remitted	24	3	0
(The names will be given in the next *Quarterly*.)			

BROADSTAIRS.

Hon. Sec.—Rev. J. H. Carr.

Proceeds of Lecture by Rev. H. Geary, Jan. 13—			
Collection at doors	4	10	3
Sale of Publications	0	14	0
Donations and Subscriptions—			
*a*Rev. J. H. Carr	0	5	0
*a*Mrs. Carr	0	5	0
*a*Miss S. Hart	0	5	0
Mrs. Crampton	0	12	0

BURNLEY.

Hon. Sec.—Rev. H. Stamer.

Collected by Miss A. Howarth and Miss Stamer—			
Dr. Briggs	1	1	0
Miss Barnes	0	10	6
Mr. Barnes	1	0	0
Mr. Butterworth	0	10	0
Dr. Brumwell	0	2	6
Mrs. A. Drydale	1	1	0
Dr. Dean	0	5	0
Mr. J. Graham	0	2	6
Miss Halstead	0	10	0
J. Howarth, Esq.	0	10	6
Miss. C. Holgate	0	5	0
Miss Hirst	0	5	0
J. Massey, Esq.	0	10	6
Jas. Shepherd, Esq.	0	5	0
Rev. H. Stamer	0	5	0
Mr. Strange	0	2	6
Rev. J. Strorgan	0	2	6
Mrs. Spencer	0	1	0
Mr. Thornton	0	5	0

CLIFTON AND BRISTOL.

Hon. Sec.—Rev. C. H. Wallace.

Mrs. J. B. Prior	1	0	0
*a*P. D. Tucker, Esq.	1	1	0
*a*F. F. Tucker, Esq.	1	1	0

	£	s.	d.
Small sums	1	0	0
*a*Rev. Canon Hall	1	0	0

CALLINGTON.

Hon. Sec.—Rev. F. V. Thornton.

Collection at Lecture by Rev. F. H. Scrivener	2	16	3
*a*Rev. H. Glanville	0	5	0
*a*Rev. F. V. Thornton	0	10	0
*a*Miss Fletcher	0	5	0
Rev. T. P. Fergusson	1	0	0
Rev. F. V. Thornton	0	3	9

CLAPHAM.

Hon. Sec.—Rev. R. B. Girdlestone, St. James's, Clapham Park Road, S.W.

Proceeds of Lecture by the Rev. Geo. St. Clair, Feb. 3, 1870—			
Collection at doors	4	0	0
Sale of Publications	0	8	4

CHELTENHAM.

Hon. Sec.—Dr. E. Wilson.

W. M. Tartt, Esq.	1	1	0
*a*T. Waddingham, Esq.	1	1	0
*a*F. Monro, Esq.	0	10	0
*a*Rev. R. Lancaster	1	1	0
*a*H. M. Jeffrey, Esq.	0	10	0

CROYDON.

Hon. Sec.—Mr. Warren.

Proceeds of Lecture by the Rev. H. Geary, Jan. 17—			
Collection at doors	7	15	6
Sale of Publications	1	12	0
Subscriptions—			
*a*Rev. Geo. Bailey	0	10	6
*a*Major Ditmas	0	10	0

CHIGWELL.

Hon. Sec.—Rev. H. M. Robinson.

Proceeds of Lecture by the Rev. H. Geary, March 4, 1870—			
Collection at doors	4	14	8

DOVER.

Hon. Sec.—W. P. Mummery, Esq.

Proceeds of Lecture by the Rev. H. Geary, Feb. 28, 1870—			
Collection at doors	11	14	0½

DEVIZES.

Hon. Sec.—Rev. W. P. S. Bingham.

Proceeds of Lecture by the Rev. H. Geary, Jan. 26, 1870—			
Collection at doors	8	0	9
Sale of Publications	0	13	0

DUNDEE.

Hon Sec.—R. Mackenzie, Esq.

Per Alex. Scott, Esq.—			
*a*Edward Baxter, Esq.	5	0	0
*a*Peter Carmichael, Esq.	5	0	0
*a*D. M. Watson, Esq.	5	0	0
*a*Messrs. Henry Smith & Co.	2	2	0
*a*Messrs. A. Low & Son	1	1	0
*a*David Small, Esq.	1	1	0
*a*James Ramsay, Esq.	1	1	0
*a*W. E. Baxter, Esq., M.P.	1	1	0
*a*Robert Mackenzie, Esq.	1	1	0
*a*Patrick Watson, Esq.	1	1	0
*a*Alex. Anderson, Esq.	1	1	0
*a*William Cox, Esq.	1	1	0
*a*Provost Yeaman	1	1	0
*a*Thomas Bell, Esq.	1	0	0
*a*John Kirkland, Esq.	1	0	0
*a*Thomas Thornton, Esq.	1	0	0
*a*Thomas Sanderson, Esq.	1	0	0
*a*A. Moncar, Esq.	1	0	0
*a*George Rough, Esq.	1	0	0
*a*David Martin, Esq.	1	0	0
*a*Patrick Anderson, Esq.	1	0	0
*a*John Laing, Esq.	0	10	0
*a*Robert Lamb, Esq.	0	10	0
*a*A. Henderson, Esq.	0	10	0
*a*Councillor Petrie	0	10	0
*a*Thos. Lamb, Esq.	0	5	0
*a*James Mells, Esq.	0	5	0
*a*Charles Smith, Esq.	0	5	0
*a*C. P. Gibson, Esq.	0	2	0

DURHAM.

Hon. Sec.—Rev. J. Dodd.

Proceeds of Lecture by the Rev. J.W. Bardsley, less expenses	10	0	0
Cash remitted	100	0	0

(The names will be given in the next *Quarterly*.)

EDINBURGH.

Hon. Secs.—Rev. W. Lindsay Alexander and A. Keith Johnstone, Esq., LL.D.

Proceeds of Sermon by the Rev. H. Geary, March 13, 1870—			
Collection at doors	12	12	0

	£	s.	d.
Anonymous donation at a Lecture	0	5	0
EXETER.			
Hon. Treasurer—Rev. P. L. D. Acland.			
Collection at Lecture by the Rev. F. H. Scrivener, Feb. 4...	11	17	0
Subscriptions paid and promised—			
Sir T. D. Acland	10	0	0
*a*Bishop of Exeter	5	0	0
*a*Mrs. Arden	1	1	0
*a*Mrs. Col. Stafford (annual for 3 years)	1	1	0
Sir J. Kennaway	2	2	0
William Porter, Esq.	1	1	0
Mr. and Mrs. Arthur Mills	1	1	0
Rev. W. Heberden	1	1	0
Rev. J. B. Strother	1	1	0
Rev. P. L. D. Acland	1	1	0
Miss White	0	10	0
C. L. Kennaway, Esq.	0	5	0
Miss C. E. B.	0	5	0
FROME.			
Hon. Sec.—Rev. T. G. Rooke.			
Proceeds of Lecture by Rev. F. H. Scrivener, Feb. 23	2	5	0
Per Rev. T. G. Rooke—			
*a*T. Green, Esq.	1	1	0
*a*Rev. A. Daniel	0	10	0
*a*Mr. Chapman	0	2	6
*a*Rev. T. G. Rooke	1	1	0
Collected by T. F. Rooke, Esq.	0	12	6
FARNHAM.			
Hon. Sec.—Rev. E. Utterton.			
John Knight, Esq.	1	0	0
Rev. W. Walsh	0	10	6
James Knight, Esq.	0	10	6
Collected by Miss Utterton—			
The Ven. Archdeacon Utterton	0	10	0
Rev. R. H. Borrodaile	0	5	0
Mr. and Mrs. S. Wigram	0	5	0
M. S.	0	5	0
GLASGOW.			
Hon. Sec.—A. B. McGrigor, Esq.			
Feb. 21—			
Cash remitted	100	0	0
(The names will be acknowledged in the next *Quarterly.*)			
March 9—			
Collected at Lecture	10	2	0
March 12—			
Collected at Meeting	10	14	0
R. Napier, Esq.	10	0	0
GREENOCK.			
Hon. Sec.—D. MacDonald, Esq.			
Proceeds of Lecture by Rev. H. Geary, March 11, 1870—			
Collection	12	0	0
Messrs. J. and Horatius Bonar	2	2	0
GLOUCESTER.			
Hon. Secs.—Rev. J. Bowman and F. Cooke, Esq.			
Collected after Lecture by Rev. F. H. Scrivener	0	10	6
Rev. W. Balfour	0	5	0
Rev. Isaac Bowman	0	5	0
Rev. D. Mayne	0	5	0
Rev. H. Haines	0	5	0
Rev. W. H. Girdlestone	0	5	0
GUILDFORD.			
Hon. Sec.—Col. Thurburn.			
Mrs. Thurburn	0	10	0
*a*Captain C. D. Campbell	0	10	6
*a*R. Shepard, Esq.	1	1	0
*a*R. C. Capron, Esq.	0	10	0
*a*Edward Futvoye, Esq.	1	1	0
Miss Wilson, per collecting card	1	10	0
Miss Lambe do. do.	0	4	8
Miss Whalley do. do.	0	4	4
Miss Legg do. do.	0	5	0
Messrs. Williamson and Sons	0	5	0
*a*Mrs. W. Mathews	0	2	0
*a*Mr. G. P. Shepherd	0	5	0
Collected by Mr. G. P. Shepherd	0	7	6
HERTFORD.			
Hon. Sec.—Rev. T. Lingley.			
Proceeds of Lecture by Rev. H. Geary, Jan. 11, 1870—			
Collection at doors	7	6	7
Sale of Publications	1	10	0
*a*Rev. C. Deedes	0	10	0
*a*Rev. L. Deedes	0	10	6
*a*Rev. T. Woodward	0	5	0
*a*C. Hill, Esq.	1	1	0
Rev. Barclay Bevan	5	0	0
*a*W. M. Armstrong, Esq.	0	5	0
Robert Smith, Esq.	5	0	0
Hon. and Rev. Lowther Barrington	1	1	0

	£	s.	d.
HALIFAX.			
Hon. Sec.—Rev. Dr. Bedford Hall.			
Rev. Dr. Bedford Hall	5	5	0
HUNTINGDON.			
Hon. Sec.—Rev. Gerald Vesey.			
Proceeds of Lecture by Rev. H. Geary, Jan. 6—			
Collection at doors	3	16	8
Sale of Publications	0	12	6
Subscriptions—			
*a*W. Foster, Esq.	1	0	0
*a*Rev. G. B. Watson	1	1	0
*a*Rev. F. Bathurst	1	0	0
*a*Mrs. Bathurst	1	0	0
*a*B. Margetts, Esq.	1	0	0
J. S. Smith, Esq.	1	1	0
IPSWICH.			
Hon. Sec.—Rev. J. R. Turnockl.			
Cash remitted	28	19	6
(The names will be given in the next *Quarterly*.)			
LIVERPOOL.			
Hon. Sec.—Rev. C. D. Ginsburg.			
Proceeds of Lecture at Everton	1	4	6
Sale of Publications	4	2	0
Dr. Neviss	1	1	0
Proceeds of Lecture by Rev. G. St. Clair, March 4, at the Prince's Road Welsh Presbyterian Church—			
Collection at doors	5	2	3
Sale of Photographs	0	4	0
Sale of Publications	0	5	0
Subscriptions and Donations—			
*a*W. Roberts, Esq.	1	1	0
J. Wood, Esq.	2	2	0
John Lloyd, Esq.	0	10	0
John Lewis, Esq.	1	1	0
John Roberts, Esq.	1	1	0
LEEDS.			
Hon. Sec.—E. Atkinson, Esq.			
Proceeds of Lecture by Rev. G. St. Clair, March 18—			
Collection at doors	2	1	3½
Proceeds of Lecture by Rev. G. St. Clair, March 17—			
Collection at doors	2	0	0
Sale of Publications	0	4	0

	£	s.	d.
LEWES.			
Hon. Sec.—Rev. R. Straffen.			
*a*Rev. J. W. Weare	1	1	0
LOWER EDMONTON.			
Hon. Sec.—Rev. R. E. Coplestone.			
Proceeds of Lecture by Rev. H. Geary, January 7—			
Collection at doors	3	0	10
Sale of Publications	0	14	6
Subscriptions—			
*a*E. McMurdo, Esq.	1	1	0
*a*Rev. R. E. Coplestone	0	10	0
MALVERN.			
Hon. Sec.—Rev. D. F. A. Grahame.			
Collection at Meeting, November, 1869, less expenses	1	9	10
MANCHESTER.			
Hon. Sec.—Rev. Walter Crane.			
Jan. 29. Cash remitted.....	100	0	0
(The names will be given in the next *Quarterly*.)			
Proceeds of Lecture by Rev. G. St. Clair, March 1, at Bowden, near Manchester—			
Collection at doors	16	18	0½
Sale of Photographs	0	1	6
Sale of Publications	0	11	2
Subscription—			
*a*C. Edwards, Esq.	1	1	0
Proceeds of Lecture by Rev. G. St. Clair, March 2, at Stretford, near Manchester—			
Collection at doors	5	18	0
Sale of Photographs	0	11	6
Sale of Publications	0	4	0
Subscriptions—			
*a*Reuben Spencer, Esq.	1	1	0
*a*James Hoy, Esq.	1	1	0
MANSFIELD.			
Hon. Sec.—T. W. Clarke, Esq.			
*a*C. H. Lushington, Esq.	1	1	0
*a*Rev. A. Brook	0	10	0
NEWARK.			
Hon. Sec.—E. S. Falkner, Esq.			
Earl Manvers	10	0	0

	£	s.	d.
The Countess Manvers	5	0	0
Bishop of Lincoln	5	0	0
The Right Hon. the Speaker	10	0	0
Lady Charlotte Denison	5	0	0
*a*R. Warwick, Esq.	0	10	6
*a*G. Gascoyne, Esq.	1	1	0
*a*T. F. A. Burnaby, Esq.	1	1	0
*a*Rev. Chas. Nevile	1	1	0
*a*P. R. Falkner, Esq.	1	1	0
*a*G. Hodgkinson, Esq.	1	1	0
*a*Rev. G. R. Chell	1	1	0
*a*Rev. S. Reynolds Hole	1	1	0
*a*Rev. H. A. Martin	1	1	0
*a*Evelyn S. Falkner, Esq.	1	1	0
*a*Rev. J. B. Cane	1	1	0
Rev. J. M. Dolphin	0	10	0
James Vere, Esq.	2	2	0
John Vere, Esq.	3	3	0
Rev. B. Maltby	0	10	0
S. Harvey, Esq.	0	10	0
*a*Mrs. Gilshap	1	1	0
M. Harvey, Esq.	1	0	0
Captain Parker, Esq.	0	5	0
Mrs. Newton	1	0	0
Mrs. J. T. Becher Pratt	0	10	0
Miss Parker	0	2	6
*a*Mrs. Hendall	1	1	0
*a*G. Tallents, Esq.	1	1	0
*a*T. S. Godfrey, Esq.	1	1	0
*a*E. M. Riddell, Esq.	1	1	0
*a*Mrs. Branston	0	10	0
*a*Mrs. Sikes	1	1	0
*a*Mrs. Clarke	0	10	0
a"A Friend"	0	5	0
*a*The Misses Lawton	0	5	0
*a*John Bakewell, Esq.	0	10	6
Mr Whiles	0	5	0
Mr. Eve	0	10	0
J. Marsh, Esq.	0	10	6
*a*Rev. H. Jubb	0	10	0
*a*Suffragan Bishop of Nottingham	0	10	6
*a*Rev. W. Prince	0	10	6
*a*Rev. W. Tinniswood	0	5	0
*a*Henry Lammin, Esq.	1	1	0
*a*Miss Denison	0	10	0
*a*Mrs. D. W. Branston	1	1	0
*a*Mrs. Hall	1	1	0
*a*Twig Society, per Miss Readhouse	0	10	6
Collection at Meeting, less expenses	6	12	3
Rev. John Byron	1	1	0
*a*John Thorpe, Esq.	1	1	0
*a*Mrs. Bakewell	0	10	0
*a*Mrs. Wilson	0	10	0
*a*Mrs. W. N. Nicholson	0	5	0
*a*Mrs. Taylor	0	5	0
*a*Messrs. Bradley and Howitt	0	5	0

	£	s.	d.
NEWBURY.			
Hon. Sec. pro tem.—Rev. J. L. Randal.			
Proceeds of Lecture by the Rev. H. Geary, Jan. 24—			
Collection at doors	8	8	10
Sale of Publications	1	9	0
PERTH.			
Hon. Sec.—R. Jameson, Esq.			
Proceeds of Lecture by the Rev. H. Geary, March 14, 1870—			
Collection at doors	5	6	8
REIGATE.			
Hon. Sec.—W. Wilson Saunders, Esq.			
Chas. Hillhouse	5	5	0
Dr. G. Holman	1	1	0
R. Chelton, Esq.	1	1	0
H. Lainson, Esq.	2	2	0
Rev. G. J. Adeney	0	5	0
*a*Rev. H. Brass	1	1	0
ST. ANDREW'S.			
Hon. Secs.—Dr. Lees and Dr. Mitchell.			
Proceeds of Lecture by the Rev. H. Geary, March 16—			
Collection at doors	6	8	1
STIRLING.			
Hon. Sec.—Rev. W. Taylor.			
Proceeds of Lecture by the Rev. H. Geary, March 15—			
Collection at doors	10	9	3
SHAFTESBURY.			
Hon. Sec.—Dr. John Wills.			
Proceeds of Lecture by the Rev. F. H. Scrivener, Feb. 24, less expenses	1	4	6
SOWERBY.			
Hon. Sec.—Rev. A. L. W. Bean.			
Sunday School Teachers, Sowerby	1	1	0

	£	s.	d.
St. Germans.			
Hon. Sec.—R. Kerswill, Esq.			
Rev. Tobias Furneaux	2	0	0
Theodore Newport, Esq.	0	10	0
Hon. Charles Eliot	0	10	0
Miss Catherine Glanville	0	5	0
*a*Rev. Alan Furneaux	1	1	0
*a*John Edwards, Esq.	1	1	0
Robt. Kerswill, Esq.	1	1	0
Tiverton.			
Hon. Sec.—Major Stehelin.			
Collected at Lecture	4	9	5½
Subscriptions—			
a— Gills, Esq.	0	5	0
*a*Miss Graham	1	1	0
*a*R. Cocks, Esq.	0	5	0
a— Stokes, Esq.	0	10	0
*a*Mrs. Bristow	0	2	6
*a*Rev. G. Luckworth	1	1	0
*a*Mrs. Coward	0	10	6
*a*W. Bisshopp, Esq.	0	5	0
*a*Major Stehelin	0	10	6
*a*Rev. Scott Moncrieff	0	5	0
Tunbridge.			
Hon. Sec.—Rev. J. W. Bromley.			
Proceeds of Lecture by Rev. H. Geary on Feb. 24—			
Collection at doors	4	3	11
Weston-super-Mare.			
Hon Sec.—James Titley, Esq.			
Jan. 2. Cash remitted	5	0	0
Wimbledon.			
Hon. Sec.—Rev. T. Whitehead.			
R. Hunter, Esq.	20	0	0
Mrs. Francis Thrupp	2	2	0
H. Watson, Esq.	1	1	0
J. A. Beaumont, Esq.	1	1	0
H. Elphinstone, Esq.	0	10	0

ERRATA.

The following corrections and additions have to be made to the last published list:—

Cheltenham—

	£	s.	d.
*a*Rev. R. Lancaster	1	1	0
*a*H. M. Jeffery, Esq.	0	10	0

For Rev. C. Mostyn read Martyn.
,, Rev. T. F. Fenn ,, Rev. J. F. Fenn.
,, Rev. T. Emmens ,, Rev. J. Emmens.
,, Dr. Rumsay ,, Dr. Rumsey.
,, Dr. Thorpe ,, Dr. Thorp.
G. Harvey, Esq., £1 1s. instead of 5s.
Rev. T. H. Cardew 5s. instead of £1.

June list of subscriptions—
J. Clarksen Hay should be Kay.
Rev. J. R. Butcher, 10s. 6d.
J. C. Sharp, Esq., should be T. C. Stamp, Esq.
Bradford collection, £8 1s. 9d., should be £3 1s. 9d.
Everton—Sale of Photographs, £1, should be £1 6s.
Manchester—Publications £7 5s., should be £1 5s. 7d.

LIST OF LECTURES

Delivered for the Fund from Christmas to March.

*** In this list the gross receipts only are given, except in a few cases, where expenses were first deducted.

			£	*s.*	*d.*
By the Rev. Daniel Kerr—					
	Leith		4	16	6
	Stow		3	14	6
	Lander		4	9	0
	Dunbar		1	0	6
	Kelso		2	5	0
	Melrose		0	15	0
	Selkirk		2	16	6
	Donations and Photographs at Lectures		6	1	6
By the Rev. J. R. Turnock—					
March	14. Ipswich		21	7	0
By the Rev. F. H. Scrivener—					
January	24. Tavistock				
,,	25. Taunton				
February	4. Exeter		11	17	0
,,	9. Yeovil				
,,	10. Weymouth		5	12	4
,,	23. Frome		2	5	0
,,	24. Shaftesbury		1	4	6
By the Rev. Henry Geary—					
January	6. Huntingdon		9	10	2
,,	7. Lower Edmonton		5	6	4
,,	11. Hertford		21	8	1
,,	12. Sunday School Union...		4	1	3
,,	13. Broadstairs		6	16	3
,,	17. Croydon		10	8	0
,,	19. Basingstoke		5	5	4
,,	20. Aldershot		3	16	6
,,	21. In the Schoolroom of St. John's, Fitzroy Square ...		4	14	6
,,	24. Newbury		9	17	10
,,	25. Hungerford		4	10	10
,,	26. Devizes...		8	13	9
,,	27. Bradford-on-Avon		3	2	3
,,	28. Trowbridge		6	11	11
,,	31. Rochester		6	12	10
February	1. Blackheath		10	11	8
,,	17. St. Albans		12	0	2½
,,	18. Papworth Everard		8	0	1
,,	21. St. James's, Notting Hill		28	6	4
,,	22. Ramsey		3	0	6
,,	24. Tunbridge		4	3	11
,,	25. St. Augustine's, Highbury		5	0	0½
,,	28. Dover		11	14	0½
March	1. Canterbury		15	15	8
,,	4. Chigwell		4	14	8

			£	s.	d.
March	9.	Glasgow (evening)	10	2	0
,,	10.	Alexandria	3	17	2
,,	11.	Greenock	12	0	0
,,	12.	Glasgow (afternoon)	20	14	0
,,	13.	Edinburgh	12	12	0
,,	14.	Perth	5	6	8
,,	15.	Stirling	10	9	3
,,	16.	St. Andrew's	6	8	1
,,	17.	Edinburgh (evening)			
,,	18.	Edinburgh (afternoon)			
By the Rev. J. King—					
March	10.	Winchester House School, St. John's Wood ...	4	6	0
By the Rev. G. St. Clair—					
January	5.	Union Chapel, Islington	13	18	0
,,	12.	Stockwell	5	9	4½
,,	13.	Lee	7	3	1
,,	17.	Westbourne Grove	3	10	2
,,	18.	Markham Square, Chelsea	3	7	0
,,	24.	Grove Street, Camden Town	6	7	10
,,	25.	Presbyterian Church, Regent Square	20	14	0
,,	26.	Bloomsbury Chapel	12	13	4½
,,	27.	Surbiton	9	1	8
,,	31.	St. Thomas's Square Chapel, Hackney	8	15	11
February	1.	Westow Hill, Norwood	13	11	1
,,	2.	Regent's Park Chapel	10	2	4¾
,,	3.	Baptist Chapel, Clapham Common	4	8	4
,,	4.	West Dulwich	6	5	7¾
,,	7.	Town Hall, Rickmansworth	3	0	10
,,	9.	Broadway Chapel, Hammersmith	6	14	9
,,	10.	Camden Road	3	17	5
,,	11.	John Street Chapel, Bedford Row	3	13	4
,,	15.	John Street, Edgware Road	9	0	9
,,	16.	Baxter Road, Essex Road	0	19	8½
,,	18.	Lancaster Road, Notting Hill	6	1	2
,,	21.	North End, Finchley	5	13	7½
,,	22.	St. Mary's Hall, Cheshunt	7	13	4
,,	23.	Maze Pond Chapel	3	11	6
,,	24.	Ealing	7	0	9
March	1.	Bowden, near Manchester	18	11	8½
,,	2.	Stretford, near Manchester	8	15	6
,,	3.	King Street Chapel, Oldham	2	15	8½
,,	4.	Prince's Road Welsh Presbyterian Church, Liverpool	11	6	3
,,	7.	Mount Zion Chapel, Sheffield	12	2	10½
,,	8.	Well Lane Chapel, Beverley	6	11	0
,,	9.	Town Hall, Scarborough	11	2	1
,,	10.	South Street Chapel, Hull	6	4	7½
,,	11.	Doncaster	8	10	1
,,	14.	Harrogate	13	3	2
,,	15.	Beeston Hill Congregational Church, Leeds ...	2	1	3½
,,	16.	Brighouse	4	16	11
,,	17.	Marshall Street Congregational Church, Leeds ...	2	4	0
,,	18.	Boston	2	16	8

PHOTOGRAPHIC AGENTS

Ashford, Kent—Mr. Thompson.
Bath—Mr. James Pooley, Milsom Street.
Beccles—Mr. J. F. Pells.
Belfast—Mr. M'Gill, Donegal Place.
Birmingham—Mr. Henry Wright, Bennett's Hill.
Bolton—Mr. Winstanley.
Brighton—Mr. Attwood; Mr. George Wakeling.
Cambridge—Mr. Metcalfe.
Carlisle—Mr. J. C. Mason, Castle Street.
Cheltenham—Mr. Westley, Promenade.
Chester—Messrs. Phillipson and Golder, Eastgate Street Row.
Dorking—Mr. W. J. Clark.
Dover—Mr. Goulden.
Durham—Messrs. Andrews and Co.
Eastbourne—Mr. A. Jinman, 147, Terminus Road.
Edinburgh—Ordnance Survey Office, 4, St. Andrew's Square.
Farnham—Mr. Nicholls, 42, Borough Road.
Faversham—Mr. Higham.
Frome—Mr. C. J. Sage.
Glasgow—Mr. David Robertson, St. Vincent Street.
Greenock—Mr. M'Kelvie.
Guildford—Messrs. Andrews and Sons, 61, High Street.
Hastings, St. Leonards—Mr. Dorman.
Herne Bay—Miss Welby, William Street.
Leamington—Mr. Knibb.
Liverpool—Mr. Adam Holden, Church Street.
Maidstone—Messrs. Wickham and Sons.
Malvern—Mr. Cross.
Manchester—Mr. Edwin Slater.
Newark—Mr. W. H. Tomlinson, 30, Stodman Street.
Newcastle-on-Tyne—Mr. H. D. Wilson.
Norwich—Messrs. Jarrold and Sons.
Nottingham—Messrs. Dunn and Co.
Oxford—Messrs. Parker and Co.
Plymouth—Mr. W. Heath, George Street.
Ramsgate—Mr. Wilson.
Reigate—Mr. Shooter, High Street.
Richmond, Surrey—Miss Hamer, 3, Foxton Terrace.
Settle—Mr. Wildman.
Shaftesbury—Mr. Bennett.
Skipton—Messrs. Edmondson and Co., *Pioneer* Office.
Torquay—Messrs. Way and Sons.
Truro—Messrs. Heard and Co.
Tunbridge Wells—Mr. Pelton, 3, Front Parade.
Wells, Somerset—Mr. C. Noad.
Worcester—Messrs. Deighton and Sons.
Yarmouth—Mr. Nall.
York—Mr. Sessions, Low Ousegate.

The price of these photographs is 1s. 6d. each. Annual Subscribers of half-a-guinea and upwards, or collectors of that sum, are entitled to receive them at 1s. each. This rule came into operation January 1st, setting aside the old rule by which guinea subscribers were entitled to receive their photographs *gratis*.

LOCAL ASSOCIATIONS.

ALDERSHOT : *Hon. Sec.*—Rev. J. E. Sabin.
ALEXANDRIA—DUMBARTON : *Hon. Sec.*—Rev. D. Wright.
ALNWICK : *Hon. Sec.*—Edward Allen, Esq.
ASHFORD : *Hon. Sec.*—F. A. Dewé, Esq.
BASINGSTOKE : *Hon. Sec.*—Rev. W. Marriner.
BATH : *Hon. Sec.*—Rev. T. P. Methuen.
BEDFORD : *Hon. Sec.*—E. W. Ransom, Esq.
BIRKENHEAD : *Hon. Sec.*—Ed. Rae, Esq.
BIRMINGHAM : *Hon. Sec.*—Rev. Charles Evans.
BRADFORD : *Hon. Sec.*—Rev. W. Dyson.
BRIGHTON : *Hon. Sec.*—Rev. D. Winham.
BROADSTAIRS : *Hon. Sec.*—Rev. J. H. Carr.
BURNLEY : *Hon. Sec.*—Rev. H. Stamer.
BURY : *Hon. Sec.*—Rev. J. Hornby.
CALLINGTON : *Hon. Sec.*—Rev. F. V. Thornton.
CAMBRIDGE : *Hon. Sec.*—Rev. T. G. Bonney, Tutor of St. John's College.
CARDIFF : *Hon. Sec.*—J. C. Oliver, Esq.
CHELTENHAM : *Hon. Sec.*—Dr. E. Wilson.
CHESTER : *Hon. Sec.*—The Very Rev. the Dean of Chester.
CHICAGO, U.S.A. : *Hon. Sec.*—Rev. Dr. Patton.
CHIGWELL : *Hon. Sec.*—Rev. H. M. Robinson.
CLAPHAM : *Hon. Sec.*—Rev. R. B. Girdlestone, St. James's, Clapham Park Road, S.W.
CLIFTON and BRISTOL : *Hon. Sec.*—Rev. C. H. Wallace.
CROYDON : *Hon. Sec.*—Mr. Warren.
DALKEITH : *Hon. Sec.*—W. Bryce, Esq., M.D.
DEVIZES : *Hon. Sec.*—Rev. W. P. S. Bingham.
DEVONPORT : *Hon. Sec.*—Rev. H. Everett, J. Venning, Esq.
DORCHESTER : *Hon. Sec.*—Rev. Handley Moule.
DOVER : *Hon. Sec.*—Mr. W. P. Mummery.
DUNDEE : *Hon. Sec.*—R. Mackenzie, Esq.
DURHAM : *Hon. Sec.*—Rev. J. Dodd.
EASTBOURNE : *Hon. Sec.*—Rev. H. R. Whelpton.
EDINBURGH : *Hon. Secs.*—Rev. W. Lindsay Alexander, D.D., and A. Keith Johnston, Esq., LL.D.
ESHER : *Hon. Sec.*—R. Few, Esq., Wolsey Grange.
EXETER : *Hon. Sec.*—Rev. Prebendary Acland.
FALMOUTH, for the County of Cornwall : *Hon. Secs.*—A. Lloyd Fox, Esq., and W. P. Dymond, Esq.
FARNHAM : *Hon. Sec.*—Rev. E. Utterton.
FAVERSHAM : *Hon. Sec.*—
FROME : *Hon. Sec.*—Rev. T. G. Rooke.
FOLKESTONE : *Hon. Sec.*—Rev. J. W. Watson.
GLASGOW : *Hon. Sec.*—A. B. M'Grigor, Esq.
GLOUCESTER : *Hon. Secs.*—Rev. J. Bowman and F. Cooke, Esq.
GREENOCK : *Hon. Sec.*—D. MacDonald, Esq.
GUILDFORD : *Hon. Sec.*—Col. Thurburn.

HALIFAX: *Hon. Sec.*—Rev. Dr. Hall.
HAVANT: *Hon. Sec.*—Rev. F. P. Seymour.
HERTFORD: *Hon. Sec.*—Rev. T. Lingley.
HUNTINGDON: Rev. Gerald Vesey.
JEDBURGH: *Hon. Sec.*—G. Fyfe, Esq.
KETTERING: *Hon. Sec.*—Rev. H. Jackson.
LEEDS: *Hon. Sec.*—Edward Atkinson, Esq.
LEWES: *Hon. Sec.*—Rev. R. Straffen.
LIVERPOOL: *Hon. Sec.*—Rev. C. D. Ginsburg.
MALVERN: *Hon. Sec.*—Rev. D. F. A. Grahame.
MANCHESTER: *Hon. Sec.*—Rev. W. Crane.
MANSFIELD: *Hon. Sec.*—T. W. Clarke, Esq.
MARGATE: *Hon. Sec.*—Rev. G. Collis.
MIDDLESBOROUGH: *Hon. Sec.*—Rev. Vyvyan H. Moyle.
NEWARK: *Hon. Sec.*—Evelyn Falkner, Esq.
NEWBURY: Rev. J. L. Randal.
NEWCASTLE: *Hon. Sec.*—Thomas Hodgkin, Esq.
NOTTINGHAM: *Hon. Sec. pro tem.*—Rev. F. Morse.
OLNEY and NEWPORT PAGNELL: *Hon. Sec.*—Rev. J. P. Langley.
OXFORD: *Hon. Sec.*—Rev. Professor Rawlinson, and Rev. Edwin Hatch.
PERTH: *Hon. Sec.*—R. Jameson, Esq.
PLYMOUTH: *Hon. Secs.*—J. B. Rowe, Esq., and J. Shelley, Esq.
PORTSMOUTH: *Hon. Sec.*—Rev. N. R. Devereux.
RAMSGATE: *Hon. Sec.*—Mr. Wilson, High Street.
REIGATE and REDHILL: *Hon. Sec.*—W. Wilson Saunders, Esq.
RICHMOND: *Hon. Sec.*—R. R. Alex.
RYDE: *Hon. Sec.*—Rev. J. Le Mesurier (Bembridge).
SCARBOROUGH: *Hon. Sec. pro tem.*—Rev. B. Evans, D.D.
SHERBORNE: *Hon. Sec.*—J. Farmer, Esq.
SOWERBY: *Hon. Sec.*—Rev. A. L. W. Bean.
ST. ALBANS: *Hon. Sec.*—Rev. W. J. Lawrance.
ST. ANDREW'S: *Hon. Secs.*—Dr. Lees and Dr. Mitchell.
ST. GERMANS: *Hon. Sec.*—R. Kerswill, Esq.
ST. LEONARDS:—Mrs. Alexander, Brunswick House, Marina, has kindly consented to receive subscriptions.
STIRLING: *Hon. Sec.*—Rev. W. Taylor.
STREATHAM: *Hon. Sec.*—Rev. W. Raven.
TAUNTON: *Hon. Sec.*—Rev. D. Alford.
TAVISTOCK: *Hon. Sec.*—Mr. Frederick Clarke.
TIVERTON: *Hon. Sec.*—Major Steheln.
TUNBRIDGE: *Hon. Sec.*—Rev. J. W. Bromley.
TUNBRIDGE WELLS: *Hon. Sec.*—Rev. W. Weston Elwes.
UXBRIDGE: *Hon. Sec.*—J. Hunt, Esq., F.R.G.S.
VENTNOR: *Hon. Sec.*—Rev. A. L. B. Peile.
WARMINSTER: *Hon. Sec.*—J. Morgan, Esq.
WELLS: *Hon. Sec.*—Rev. G. Fagan.
WESTON-SUPER-MARE: *Hon. Secs.*—Capt. T. Townsend, R. E., and J. Titley, Esq.
WIMBLEDON: *Hon. Sec.*—Rev. T. Whitehead.
WORCESTER: *Hon. Sec.*—Rev. Francis J. Eld.

PUBLICATIONS OF THE SOCIETY.

1. Report of Preliminary Meeting, 1865.
2. Captain Wilson's Expedition, 1866.
3. Meeting at Cambridge, 1867.
4. Annual Meeting, with Lieut. Warren's Report. 1868.
5. Statement of Progress, January 1st, 1869.
6. Lieut. Warren's Letters and Reports, with lithographed plans.
7. Lieut. Warren's Notes on the Valley of the Jordan and Excavations at Ain es Sultan (Jericho).
8. Dean Stanley's Sermon on the Exploration of Palestine. Price 6d.
9. Quarterly Statement. No. I. April 1st, 1869.
10. Quarterly Statement. No. II. June 24th, 1869.
    Contents: Mr. Deutsch on the Letters at the S.E. Angle of the Haram.—Captain Wilson on the Synagogues of Galilee —Mr. Rogers's Excavation of Tell Salahîyeh.—Mr. Eldridge's Meteorological Observations.—Mr. Simpson on Robinson's Arch.—Lieutenant Warren's Letters.
11. Quarterly Statement. No. III. September 30th, 1869.
    Contents: Statement—Rock-cut Tombs of Palestine, by Captain Wilson—Rev. Dr. Zeller on Kefr Kenna—Tables of Latitude and Longitude—Comparative Holiness of Mounts Zion and Moriah—Notes: Gold in Palestine; A Singular Custom—Report of Annual Meeting—Meteorological Observations. By James Glaisher, F.R.S.—Lieutenant Warren's Letters continued, No. XLIII. to XLV.
12. Quarterly Statement. No. IV. January 1st, 1870.
    Contents: Statement of Progress—The Ceremony of the Doseh at Baalbec, by Mr. Morrison—The Site of Ai, by Captain Wilson—Results of Meteorological Observations taken at Beyrout, Syria, by James Glaisher, F.R.S.—The Desert of Tih—Notes on a Visit to Saida, &c., July, 1869, by Captain Warren—The Coleoptera of Palestine, by Mr. Crotch—Remarks on a Visit to 'Ain Jidy and the Southern Shores of the Dead Sea in Midsummer, 1867, by Captain Warren.
13. Quarterly Statement. No. V. April 1, 1870.
    Contents: Statement of Progress—The Moabite Stone, with an Illustration—The Temples of Cœle-Syria, with two Illustrations, by Captain Warren—The Summit of Hermon, with an Illustration, by Captain Warren—Our Summer in Lebanon, with an Itinerary, by Captain Warren—The Rock Tombs of El Medyeh, by Dr. Sandreczky—The Stone of Zoheleth, by M. Clermont-Ganneau—Letters from Mr. E. H. Palmer, Nos. I. and II.—Arabic Glossary—Captain Warren's continued Letters.

Nos. 5, 9, 10, 11, and 12 may be had by all subscribers. 9, 10, and 11 are sold at 1s. each to non-subscribers, and 6d. each to subscribers, after the first copy.

A complete set of the lithographs, now 40 in number, may be had by forwarding stamps at the rate of 2d. for each lithograph required.

LECTURES.

The following gentlemen are authorised to give Lectures on behalf of the Fund:—

Rev. F. H. Scrivener, St. Gerran's Rectory, Grampound, Cornwall.
Rev. J. W. Bardsley, Bootle, Liverpool.
Rev. Henry Geary, Herne Bay.
Rev. James King, St. George's, Hanover Square.
Rev. G. St. Clair, Banbury.
Rev. Daniel Kerr, Dunse, N.B.
Edward Allen, Esq., Alnwick.

THE

PALESTINE EXPLORATION FUND.

STATEMENT OF PROGRESS.

The present number of the *Quarterly* completes the series of letters written by Captain Warren from Jerusalem. He has now returned, with the whole party of non-commissioned officers of the Royal Engineers under his command, all of them, including himself, invalided home from the effects of hard work and climate.

This is perhaps a fitting place for a very brief expression of the Committee's sense of Captain Warren's most valuable services. The readers of his letters are already familiar with the work he has done in Jerusalem. They are not, perhaps, so well acquainted with the difficulties he has had to encounter. The prejudices and jealousies due to religion were obstacles he had to expect. These, however, as was shown by Captain Wilson's success in making the Ordnance Survey, were not insurmountable, and had been greatly exaggerated. The Committee have not yet been able to obtain permission for investigations to be made beneath the surface of the Haram Area; but in examining the south, west, and east sides of the Haram Wall, Captain Warren has not met with opposition greater than was to be expected. But there were other dangers, belonging to the peculiar character of the work: the shafts, like long slender pipes, ran through a kind of shingle composed of *débris* and rubbish, which when disturbed ran like water, sometimes for days together, crushing in the gallery frames and endangering the lives of those who were at work in the shaft. The heat, again, with the absence of ventilation, was so great in these narrow tubes as to be sometimes insupportable. Yet Captain

Warren never had an accident among his fellahîn, or lost a life. In estimating the work he has done, the anxiety he has undergone on this account alone, in addition to the fatigue and sometimes the disappointment of his work, must be borne in mind. There is perhaps no city in the world which now stands on an accumulation of ruin and rubbish of such depth and such antiquity as Jerusalem, and consequently none where excavations are more costly, more uncertain, and more perilous. Captain Warren contributes this quarter, besides the usual letters, an account of his expedition to the East of Jordan, which was undertaken more than two years ago. The survey work alluded to in his account has for some time been in the hands of the Committee, and will be published in a map of Palestine now approaching completion. The statement read by him at the Annual Meeting on May 16th will give to most readers information supplementary to and explanatory of many points in his letters.

It has been found impossible, with the work on hand, to get Captain Warren's personal supervision for the proposed engraving of the Haram Area. This must, therefore, wait. It is hoped to give it with the next number.

Mr. Klein's letter on the Moabite Stone supplies the information that was wanting to complete the story of its discovery. It has already been published in the *Pall Mall Gazette*.

Mr. Palmer's letters on the Desert of the Tîh and the country of Moab were written in haste, and are necessarily incomplete. They give sufficient information, however, to show that a fuller report of what he has done will contain much that is entirely new as well as deeply interesting. Mr. Palmer will probably return home in the course of the summer.

The Committee have to express their gratitude to Mr. Tyrrwhitt Drake for his valuable co-operation with Mr. Palmer *—and their hope that his contributions to the knowledge of natural history will prove valuable enough to repay him for the fatigues he has undergone.

Arrangements have been made for the publication of a book which will contain, as fully detailed as the space will allow, the results up to the present time of the work of the Fund. The Com-

* See Mr. Grove's speech in the Report of the Annual Meeting.

mittee hope that they will be enabled to offer this book to subscribers at a reduced rate. Full particulars will be announced in the next *Quarterly*.

The Committee are now engaged in maturing their plans for the next expedition to Palestine. Any suggestions, information, or advice on the subject from their friends will be willingly received and considered. But in offering such suggestions, it is hoped that the original prospectus of the Fund, the basis on which the Committee works, will be steadily borne in mind.

The squeezes taken by Captain Warren of the two larger fragments of the Moabite Stone have been all photographed full size, and can now be obtained. The four photographs can be had together for £2 10s., which is about the cost of their production. Casts of the fragments have been taken, and any subscribers wishing to obtain them for a museum, or for themselves, may address the Secretary on the subject.

In conclusion, attention is called to the remarks made by the speakers at the Annual Meeting, the report of which is here published.

THE ORIGINAL DISCOVERY OF THE MOABITE STONE.

BY THE REV. F. A. KLEIN.*

It was on the 19th of August, 1868, that in the course of a journey I undertook to Jebl Ajloon and the Belka I arrived at Dibân (ancient Dibon), about one hour to the north of the Wadi Mojeb (Arnon). For the sake of my friend and protector Zattam, the son of the famous Fendi-l-Faïz, Scheich of the Beni Sachr, who accompanied me, I was received in a most friendly way by a tribe of the Beni-Hamîdeh, encamped near Dibân. Carpets and cushions were spread in the tent of the Scheich, and coffee prepared with all the ceremonial of Bedouin etiquette. Before the operation of preparing and drinking coffee had been terminated, my friend Zattam, who was always most anxious to make my tour as pleasant and interesting as possible, had informed me that there was among the ruins of Dibân, scarcely ten minutes from our encampment, a most interesting stone with an ancient inscription on it which no one had ever been able to decipher, which he would take me to see. As sunset was drawing near I was anxious to be off at once, but Zattam

* This letter was addressed to Mr. Grove, and appeared in the *Pall Mall Gazette* of April 19th, 1870. The sketch alluded to is in the office of the Fund. It was published also in the *Illustrated London News*.

was not to be persuaded to get up from his soft couch and leave off smoking his narghilee; while I was burning with a desire to see the inscription, which the Scheich of the Beni-Hamîde also described to me as one of the wonders of this region, which no Frank had yet seen, and which he now had offered to show me as a mark of honour to his friend Zattam and to me who was travelling under his protection. I, of course, took this for what it was in general meant to be: a Bedouin compliment calculated to bring out a nice bakshish. Still I afterwards ascertained that his assertion as to no European having before me seen the stone was perfectly true; none of the distinguished travellers in those parts had ever seen or heard of it, or they would not have shunned trouble and expense to secure this treasure. I am sorry to find I was also the last European who had the privilege of seeing this monument of Hebrew antiquity in its perfect state of preservation; and it is for this reason I think the few observations I am able to offer on the subject may be welcome to those who take an interest in this important discovery. When I came to the spot where this precious relic of antiquity was lying on the ground, I was delighted at the sight, and at the same time greatly vexed I did not come earlier, in order to have an opportunity of copying at least a good part of the inscription, which I might then under the protection of Zattam have done without the least molestation. I, however, had time enough to examine the stone and its inscription at leisure, and to copy a few words from several lines at random, chiefly with a view, on my return to Jerusalem, to ascertain the language of the inscription, and prevail on some friends of science to obtain either a complete copy of the inscription, or, better, the monument itself.

The stone was lying among the ruins of Dibân perfectly free and exposed to view, the inscription uppermost. I got four men to turn it round (it was a basaltic stone, exceedingly heavy) in order to ascertain whether there was no inscription on the other side, and found that it was perfectly smooth and without any inscription or other marks. What time was left me before sunset I now employed in examining, measuring, and making a correct sketch of the stone, besides endeavouring to collect a perfect alphabet from the inscription. What I have I now enclose, and vouch for the perfect correctness of what I give, having taken it down on the spot. The stone is, as appears from the accompanying sketch, rounded on *both* sides, not only at the upper end, as mentioned by Monsieur Ganneau, who says: "La forme de la stèle était celle d'un carré long, terminé en haut par une partie arrondie, l'angle inférieur de droite était déjà cassé depuis fort long-temps." From his sketch also of the stone he admits it not to have been rounded, but square at the bottom; but the fact of this being so cannot but be of importance to him, as it will give him the comfortable assurance that in the lower corner sides there are not as many words of the inscription missing as would be the case if it were square at the bottom, as he was wrongly informed by his authority; for, as in the upper part so also in the lower, in exactly the same way, the lines become smaller by degrees.

Possibly in the length of the several lines there may be more letters to supply, as now supposed, as in this respect the information received by M. Ganneau is not quite correct. He says of the stone:—"D'après les estampages elle aurait eu 1 mètre de hauteur et 0.60 centimètres de largeur, avec une épaisseur égale."

According to my correct measurement on the spot, the stone had—

1 mètre 13 centimètres in height,
„ 70 centimètres in breadth, and
„ 35 centimètres in thickness,

and, according to my calculation, had thirty-four lines; for the two or three upper lines were very much obliterated. The stone itself was in *a most perfect state of preservation*, not one single piece being broken off, and it was only from great age and exposure to the rain and sun that certain parts, especially the upper and lower lines, had somewhat suffered.

On my return to Jerusalem I showed my sketch and parts of the inscription to Dr. Petermann, of Berlin, who I knew took great interest in archæological researches, and he was delighted at the information, and immediately took the necessary steps to acquire the Moabite monument for the Berlin Museum. A young clever Arab at Salt was entrusted with the business of transacting the matter with the Bedouins at Dibân, but the difficulties he met and the greediness of the Arabs put an insuperable obstacle in his way. The services of another native were subsequently engaged, but also without success. The matter, being thus necessarily entrusted to the hands of natives, of course then ceased to be a secret, and other parties also heard of it and exerted themselves with laudable zeal and energy to obtain, if not the stone itself, at least a copy of it; and one cannot too highly praise the zeal, energy, and tact of M. Ganneau and Captain Warren, who have through their exertions preserved to the learned world parts at least of this most valuable monument of Hebrew antiquity, and who I sincerely trust will ultimately succeed in obtaining and deciphering the whole inscription.

Scheich Zattam has since informed me that he had in his possession a small idol made of brass with similar characters upon it, which I have, however, lately been informed was sent to Nablous, and sold there. Whether this is true or not I know not. But most assuredly a scientific expedition to Moab is a great desideratum, and could not but greatly enrich our knowledge of Hebrew archæology.

I have to add that among the letters I copied from the Moabite inscription I see several letters which are not found in the parts published by M. Ganneau and Captain Warren. Probably these letters are of rare occurrence, and found on pieces not secured. I have not thought it necessary to give you my entire alphabet, but only those letters I missed in the inscription published by the gentlemen referred to.

F. A. Klein.

Jerusalem, *March* 23, 1870.

EXPEDITION TO EAST OF JORDAN, JULY AND AUGUST, 1867.

[*Accounts of portions of this journey are given in Letters* I. *and* III., *pages* 1 *to* 14.]

While we were making our excursion to 'Ain Jidy, in July, 1867, a messenger had brought up Goblan from the east of Jordan, and we found him waiting for us on our return to Jerusalem. An arrangement was made that he should take us over his portion of the country, and point out the principal ruins, &c.

The illness of Corporal Birtles was now my principal anxiety. He had been taken with a sharp attack of dysentery just before our departure for 'Ain Jidy, and we left him in Jerusalem; and now, on our return, he appeared to be no better. Dr. Chaplin very kindly offered to take care of him during our absence; but in this case, he would have to go into town after having been some months under canvas, and this was very undesirable. Corporal Birtle's own impression was that he should recover if he came with us, and after getting some medical instructions, I undertook the charge of him, but not without some fear that he would not return with us.

We left at 3 p.m. on 17th July, 1867, and arrived at 'Ain as Sultân at 7.30 p.m. Our party consisted of our invalid, Corporal Birtles, the photographer, Corporal Phillips, his assistant, Edward Hanour, and Jerius the dragoman. Our guard varied in numbers, according to the security of our position, from five to forty men. Sheikh Goblan always slept close to our tents, and never gave me any trouble in camp. He would come into my tent once a day for orders, stand up while he received them, and retire afterwards, apparently without ever thinking of sitting down.

When we were travelling I did not find him so pliable; he had got his line of route in his head, and the sights we were to see, and the going out of the line here and there, when surveying, disturbed him considerably.

July 18.—'Ain as Sultân. Started at 6.30 a.m., and arrived at en Nwaimeh ford at 8.30. It was oppressively hot; the thermometer only registered 98° Fahr.

The Jordan just now was very low, and there was little danger in crossing; for about thirty feet the depth was seven feet or more, and for the remainder it was only two to four feet. We had to wait some time for our baggage, but when it did arrive, we were only about an hour and a half in crossing. The tents and nearly everything else were left on the mules' backs, but the photographic apparatus and box were put on a horse's back, with a man astride behind, and several on each side, and carried across with much shouting. When we crossed there were two Bedouins on each side, to hold our legs and guide the

horse, and it struck me that they did their best to pull us off. Luckily all our horses had manes.

Photograph No. 293 shows the ford just after two horses have carried some things over the deep part of the river. Left the eastern bank at 10.50, and passed through tamarisk and acacia trees; at 11.15 got up on to the upper plain, and passed through acres of the dry shrub ghurrab.

At noon we got into irrigated ground, and passed the only osha plant I have seen on the eastern side north of Dead Sea. Still passing east, we arrived at the mound of Nimrîn at 12.30 p.m. Here are ruins and a sheikh's tomb, with a curious figure cut on a stone—a man on horseback with his sword hanging in the air in front of the horse's head (see sketch). Also a capital of a column (see sketch). Left at 3 p.m., and passed through country well cultivated by the black Bedouins; at 3.30 Goblan showed us Neba, a lumpy hill overlooking the northern end of Dead Sea, on east side; at 4 p.m. arrived at the isolated artificial mound of Kaferein. It was excessively hot here, and on the baggage arriving, eighteen of the fowls in the coops were found to have died. Around us, on all sides, were rivulets passing through dense masses of underwood, and carried off here and there for irrigating purposes. The amount of verdure on the eastern side, in spite of the hot sun, was quite remarkable after the burnt-up aspect of the western side of the river.

July 19.—The heat during the night had been oppressive, but still Corporal Birtles was no worse, and there were hopes for him. Minimum in night, 80° Fahr.; at 7.8 a.m., in shade, 91°. Went down at sunrise to look for ruins, but the growth of underwood was too great to allow of our proceeding far on either side of the paths. It is quite possible that there may still be extensive ruins about here, concealed by the verdure.

Left at 7.8 a.m., and went south; at 7.40, Wady al Mashâideh, close to which is a warm spring, in a little basin concealed by rushes. Temperature, 95° 5′ Fahr. Left at 8.30, and turned to east and ascended Wady Hâdâd, which is the upper part of the Kaferein, 8.42. Wady Habathâ runs in on right, and there is a ruined aqueduct on left; at 8.56 Wady umm Adsîs on right, and at 9.15 Wady Artab on right. There is here a very rapid stream in Wady Hâdâd. We now turned up the hills to north, and at 9.30 took angles from point C; at 9.50 came on hill in Wady Sûr; passed to east till, at 10.36, we stood on the watershed separating Wady al Mahâfeh from Wady Jaryah. Left 10.40, and at 11.2 came on extensive ruins of a fortified town, called Khirbet Sûr. These buildings occupy a shallow valley on the hill, and a crenelated wall runs round them. Left at 11.20. To our south-west we were told of a large cave in side of hill: at 12.15 came to brow of ridge to east, and in five minutes got down to the ruins of Arak al Emîr. Thermometer in shade was here 94° Fahr.

Photographs Nos. 295—299 were taken of the ruins, and a ground-

plan made of the palace; in the evening, observations were made from a ruin on crest of hill to west.

July 20.—Our camp was delightfully placed below Arak al Emîr, near the stream of Wady Seïr, and the thermometer registered a min. of 53° Fahr. during the night: by 7 a.m., however, it had mounted up again to 87° Fahr. Took some more measurements at the palace (see sketch), bearing of front wall 160°, and left at 8.15 a.m. Near here the Wadies Seïr, Bahâr, Nâûr, and abu Aineïn, come together, and are called Wady Hâdâd. Went up hill to east, and at 8.40 reached point. To our west was a ruin, Um al Medâris; left at 9 a.m. 9.38 crossed Wady Behâr, near junction of three wadies; there is here a great stream of water 18ft. wide and 2ft. deep, and oleanders fringe the bank; up the sides of the brown hill are bright green lines, showing that many streams of water are oozing out. We now ascend the hills to south, separating the waters going to Kaferein from those passing from Hesban to Ar Ram, and at 10.10 stood on Jebl Jabûd. Close by was the 'ain of Nînî on right; at 10.45 got to top of Jebl Jabûs; left 11.10., and turning south down a wady, came at noon upon Wady Hesban, and in five minutes to the 'ain of same name.

This fountain is a delightful spot (see photograph No. 300), a great volume of water rushing straight out of the side of the rock, which is a limestone conglomerate. The wady through which the stream flows is about fifty yards broad at bottom, and nearly flat, having once been cultivated; and here the cattle for miles round come to be watered, and all through the day they are passing by.

Soon after noon we went down the wady, and in seven minutes came on the Benâyet Sakr, a great khan belonging to the Adwan, which they say they built when Ibrahîm Pasha ordered them to live in houses; but it is now a ruin. Round about are Shunet and some other modern buildings; on the walls are scratched several Arabic fantasia. We made our way up Wady Bûweïb on the south bank to Hesban, which is greatly elevated, and from whence there is an extensive view over the Belka to south. There are ruins here in great confusion. I observed some attic bases of columns, and four columns side by side; the stone is soft, and appears to be Malaki: diameter of column, 2ft. 6in.

The Bedouins began to flock around us, and threaten us if we did not give them backshish; we had only two of our guard with us, and these got frightened and said they must go. By asking the people absurd questions about the sheep they ought to kill for us, &c., we diverted their attention, and got together and in order, and got away without a row.

I think it probable that with a little search some Greek inscriptions would be found about the ruins of Hesban; there are also caves about, which we were told were cut into tombs and houses. It was rather unfortunate that it should have happened just then to be in

the hands of a hostile party. A sketch of a sculptured stone lying about is given. We left at 5 p.m., and got to bottom of wady at 6; crossed over to observe with theodolite from opposite hill at sunset.

Sunday, 21.—Thermometer minimum in night, 75° Fahr.; maximum in shade in day, 96°. Walked up the Wady Hesban till I came on the Belka, where I found the Bedouins shovelling grain into a hole in the rock; slipped down into it to examine it, and found it to be a simple cave plastered round, quite full of grain, except 3ft. at the top. The Bedouins tell a story about these granaries; they say that when the grain is inside and the door is shut, a foul air arises from it, and no man can enter until the stone door has been left open some days; consequently it is not necessary to have a guard always there, but they send one up occasionally to see that the stone has not been removed. If this be true, it is quite evident that a sudden raid upon the granaries of another tribe would be of no use, as they could not enter, and this may account for the corn being put in such queer out-of-the-way unprotected spots.

22nd.—Took some angles, and left 'Ain Hesban at 7.3; took our course down the wady to west on left bank. On our way we were told that Wady Hesban joins Wady Kaferein about an hour before reaching the Jordan. 7.45—Shunet as Sakr, passed patches of tobacco, melons and cucumbers, and long dry grass; flocks of blue pigeons whirling about over head, and some human skulls lying about on the ground, one of which was was picked up and forwarded to London. 7.58—Came to on left Wady Bûweib and the road leading up to Hesban; left 8.7, continued to west down Wady Hesban, and at 8.20 mouth of Wady Ahfdheïl. To west of this about one hundred yards, is a huge block of rock, scarped by nature to a height of 30 to 40 feet; no inscription on it could be seen. We now came in sight of the Jordan.

8.30.—A bend in wady and a large open space with ruins of mills; the wady becomes a foaming torrent closed in by rocky banks.

8.35.—Passed a spring at Bûwarideh, and to the left, somewhat up the hill, a house or castle in ruins; left 8.40; in five minutes came on another 'ain of same name, issuing from the limestone rock among fig-trees; left at 8.56. We turned up the hills to left, and getting into rough ground, the lime gave way to sandstone; at 9.45 we dismounted, and left our horses, and passed along a narrow causeway, and in a few minutes came upon a spur of a hill rising in a little peak. Here are the remains of a castle named Kulât umm abu 'l husseîn; from it is an extensive view of the north end of Dead Sea and lower end of the Ghor; it seems probable that it once guarded the road leading from Ar Ram to Hesban.

This peak is of sandstone of the most gorgeous colours, streaked here and there red, purple, blue, and yellow; then again it appears to have been vitrified and burnt black; and again there appear to be pieces of scoria about: several specimens have been sent home. There are

several large caves cut out of the rock, some of them 30ft. square. Down below us, about 300ft., was the Wady Hesban, now become a series of cataracts, and apparently falling due west to the Ghor. We left at 10.30, and 10.40 mounted our horses and went up Wady Hasseïn to south, up hill, and across Wady Mushkâr, along western side of a hill, and crossed a plain where were some graves, then over a place broken up by dry watercourses, and at 12.20 passed Wady Mûsa; at 12.27 arrived in camp at Ayûn Mûsa. Left at 3.55 p.m., and passing up hill to south stood on the ruins of the town of Neba at 4.17. This, together with Jebl Neba and Ayûn Mûsa, is described at page 86, Letter XXXV. From the ruin we could see to north, in a wady, a great heap of stones called al Khaloah, looking in the distance very like Stonehenge, but Goblan assured me they were only rocks which had been rent by an earthquake and left standing on end, and it being out of his programme, I could not get the exact position, having only one angle to them; probably they are on the south bank of Wady Hesban. Returned to camp after sunset.

July 23.—Started 8 a.m. up Wady Mûsa, and 8.30 got on Heights of Belka; went south-east, and at 8.35 came on a small ruin to left and mound to right: ground partially under cultivation, and patches of Indian corn about; passed an extensive Arab encampment of another tribe. 8.55, a little ruin on right al Lisrâ, and half mile in front of us al Kafeir. 9.10, ruins (they said, of Christians); the stones here are a conglomerate: near here was a great millstone 9ft. 6in. in diameter and 16in. thick, apparently for crushing olives, but there was not an olive-tree within some miles. We now turned south over a splendid plain, and at 9.50 passed a footprint cut on the rock called al Turkmanîyeh. At 10.5 Madiyaba was on our left, two miles off, in hollow; and at 10.27 we came to Tel al Massîâj, a ruin on hill: left 10.40. At 11.15 we arrived at Mâ'ain; here are very extensive ruins, and the country is much under cultivation; harvesting was now going on. Half mile to our south-east was another large ruin, al Um Russûs: at this place a Nabatian inscription has been found, copy of which has been forwarded. As we wished to go down and photograph the Zerka Mâ'ain, we had to go through the ceremony of being given over to the sheikh of this part of the country, and Goblan had to remain behind. We went to a ruin about half a mile to south, from which photograph No. 303 was taken: from here we could see very plainly the ruins of Makhaur (Machærus) on Jebl Atrûd, where we were told there was very much to be seen; there were also several towers dotted about. We left at 1.30, cantered on, and passed footprint at 2.40, and Christian ruins at 2.50, and mounted Jebl Neba at 3.25: left 3.35 for camp, and took photographs Nos. 301 of the Ayûn and 302 of the town of Neba.

Goblan could not show us some of the ruins on the plain on account of hostile Bedouins.

July 24.—We were disturbed last night by some bullets whizzing past our tents, and then a skirmish taking place: the noise in a short time

faded away in the distance, and on looking out we found we were the sole inmates of the camp, for all our Bedouins had given chase down the wady after some black men of lower Ghor on the Dead Sea, who were unfriendly with the Adwan, and had made an attack upon them. It seemed a long time before their return. Goblan said he must leave next morning.

Left at 6.50 a.m. Ayûn Mûsa, and passed up Wady abu 'Nneml; at 7.25 took angles, passed a few scattered terebinths, and then passed to east up Wady Kar'n Kebsh at 7.35; 7.50 came on watershed on Belka. At 8.5 mounted Jebl Mashkar, where are ruins, and another one, Abu Abdallah, on south. We could also see Umm al Amûd, a large hill or mound on plain; at 8.20 passed on left a little hill, Tel al Arish; and going east, at 8.35, Rajm Asrârah, the remains of a tower 30ft. square, stones 3ft. by 4ft. by 3ft.; at 8.50 came on Sawwâneh, a flinty hill, took angles, and left 9.5. Close by was al Batîm, a small ruin; to our right was a hill and ruin, Howâreh, and now we went towards Hesban. At 9.15 saw a man waving his hand and beckoning to us, and on going up to him recognised the hotel cook, who had come over to visit his brother. At 9.25 came on east side of Hesban: here is a pool 144ft. long by 135ft. and 10ft. deep. We now passed up wady to Al 'Aâl at 10.10. There is little of interest here; one solitary column stands amid a heap of stones, many tanks, with circular opening.

10.55. Began now to descend a wady to east, and passed on right a line of rock 15ft. high, with an opening; at 11 passed near ruin Manha, and came to al Burkeh, some vats cut in rock (see sketch), for collecting the juice of grapes, apparently; for two days Goblan had talked about the pools near Hesban, and they ended in these vats; left 11.10, the rocks here lie horizontal; 11.25 came to Beit Zura'at, and 11.30 Umm al Khanafish; here is a building 41ft. 9in. by 34ft. of bevelled stones, with loopholes; stones 13in. high, 3ft. 9in. long, and 1ft. 8in. thick, sandstone.

At top of hill are very extensive ruins. Left at 12 noon. We now went nearly north among ruins, among which in many places were to be seen pointed arches based on earlier material; passed along an old road 80ft. wide, and then among some cutting in rock as if for tombs; at 12.45 Abu Nakleh, an extensive ruin on a hill, with other ruins scattered round; left 2.30, and at 2.35 passed a ruin, Balâäth, and also a cistern with water. In front of us was a large clump of fir-trees called As Snoberat; at 3.5 came to watershed, and, passing down a wady running to west, came on Ain Náûr at 3.25 p.m. The rocks about here are chalky.

25th July.—Wady Náûr flows north of K. Nînî into Wady al Bahar, according to the testimony of several independent witnesses; both Van de Velde and Tristram ("Land of Israel," page 534) place it as running into Wady Hesban.

Our camp was in the wady near the ruins of Náûr, but we did not see them; we were close to the little 'ain, which at this time of year is

a trickling rill, oozing from several crevices in the rock, and getting lost after it has gone a few feet down the valley. Below us the bed of the channel opened into a small glade. We could get no view to any extent about here, not even from Jebl Nâûr, which, unfortunately for observations, is covered with trees like the terebinth.

We started at 7.5 a.m. up the wady, and shortly came on another 'ain and some cut rocks to our right.

At 7.35 we were at the foot of a hill on right side of wady, called al Awâly: it rises to about 100ft. above the surrounding country, and the view from it should be magnificent; it happened to be hazy, but as it was I took a round of angles with the theodolite to more than forty places, among others to Neby Samuel, Dome of the Rock, Frank Mountain, and Neby Hûsha. Tahîn was very conspicuous, it rises in such an artificial-looking lump.

It may be observed that the country about here is not hilly or mountainous, but is rather a succession of nearly horizontal plains intersected and cut up by deep wadies and ravines. The consequence of this is that from the few hills that are elevated at all above the levels of the plains, very extensive views can be obtained, but they are often marred by the growth of trees or scrub upon the summits; thus I have found a difficulty on one or two hills in observing, on account of the height of the underwood. This of course could be readily obviated in a systematic survey, but in a reconnaissance it is a grave hindrance.

The top of Al Awâly is a sort of saddle about half a mile long and 100 yards wide, strewed with ruined buildings, apparently of a large village. Left at 9.7 a.m. Continued up the wady till 9.22 a.m., when we came on Umm a Samâk, a hill on which are most extensive ruins, all in confusion. Here are columns, pedestals, and capitals lumbering the ground, and no idea of the ground-plan of the temples or public buildings of which they formed part could be obtained during the short time we were able to examine them.

Some of the capitals are Corinthian; there are a great many pilasters about, and the pedestals appear to be peculiar to this country; it consists of a very large torus quirked between two platbands.

A very large pedestal of the same kind has been lately dug up at the Convent of the Sisters of Sion at Jerusalem, and is now to be seen in the chapel attached to that establishment.

We had now arrived in a very remarkable piece of country. Over a tract four miles square there is a never-ending succession of ruins. On each spur there appears to have been a village, on each hill-top a temple or public building; in one square mile I have shown six of these on the plan, but I could not put a fifth of them in, they seemed to turn up in every direction. This tract appears to have been more like one large town than anything else, and yet there is at present very little water here; it is, however, a portion which most decidedly merits a more lengthened visit than I was able to afford it, for in names alone it is most rich. It does not appear that this part has been visited by any

European before. A great portion of the masonry is no doubt Roman, but there is a good deal which appears to be older.

At Umm es Samak there are some semicircular arches over cisterns. We left at 9.47, and saw to our south a hill apparently pierced with many caves; one of these is in the first chamber a sort of Columbarium, having rows of pigeon-holes round the wall about 7½in. wide, and 10in. high, and 2in. to 4in. deep; the chamber is nearly circular. In the inner chamber are fifteen loculi. (See sketch.) In five minutes came on ruin of Banayet, No. 1; there are three of same name.

Banayet No. 2, a ruin of no great size. Passing the mouth of a wady to the right, we came on the remains of a Roman road. Corporal Phillips went over to examine a cave inside of clift to right: he reported it to be excavated in the rock, nearly circular on plan, about 40ft. in diameter, and that there were a few sarcophagi about, and some columns.

10.40 came to point A, from which observations were taken; and at 10.45 a ruin from which was a good view of the plain to south: left at 10.52. At 11 a.m. on top of hill at a ruin, Amâry; and at 11.12 at our camp about a mile farther on to south in valley. There was no spring of water here, only a cistern with water of a disagreeable taste; but Goblan said it was the only place about here that he could encamp. We were, in fact, just on the borders of the neutral ground between the Adwân and some tributary of the Beni Schor; the ground itself was well defined, for it was black with fire, the hostile tribe having burnt it when they left some weeks before, so that the Adwân might make no use of it: these people were now back again, and camped a few miles from us. A great part of the country we had traversed to-day was covered with heather and few trees. A glance at the map will show that we were now on one of the highest portions of the country to east of Jordân, close to the watershed of the northern and southern Zerkas and Wady Náûr; it is elevated perhaps 300ft. above the southern Belka, and it is intersected by shallow wadies. We left camp at 1.30 p.m. Goblan was very mysterious about a black stone on a hill, and showed it me as a great treasure; it is 5ft. long, 2ft. 6in. high, and about 2ft. 6in. wide, and it is stepped down at one end. I could not understand for what it had been used, but there was nothing very remarkable about it.

We now passed another ruin, also called Amâry (it is the name of a district, and there are three ruins in it), at 1.53 p.m., and passing down a small wady to east found K. es Sûk to our east, Jahrah to our right. The former must have been a place of considerable importance, for it is a vast ruin. In the valley are the remains of a temple 81ft. in length and 66ft. in breadth, lying east and west, entrance to east: inside there are two rows of Ionic columns, 2ft. 10in. in diameter; they are 26ft. apart, and 19ft. 6in. from centres to side walls; the capitals appear to have been very handsome; the bases could not be seen; Saracenic arches obscure much of this temple and confuse the plan. (See photograph 304.)

Further to east is a mausoleum, entrance to west; its length is 41ft., and breadth 39ft; there are two sarcophagi or washing-troughs close to the entrance; the roof has fallen in (photograph 305); height about 9ft. To the north, up the hill, there is a great extent of ruins; and on a little knoll on the summit a little platform 36ft. by 27ft. (see photograph 306), entrance to east; round the sides are sarcophagi, or perhaps troughs, with the mouldings so common to this part of the country: this latter place has probably once been under cover, as in front was found what appears to be a portion of a pediment and a sculptured frieze of the Corinthian order (see sketch, No.); in front is a tank 31ft. east to west and 26ft. north to south; it has piers built up the length connected by arches, and then vaults are thrown over, the span of one 19ft., of the other 6½ft.; the object of this was not discovered; the cistern is cut in the rock.

We left at 4.40 p.m.; passed Rejm Moyîs, and then Rejm Howîth, in five minutes. Jazûr, near camp, and Fazâza: the Bedouins here are called Sch'kâra. We saw on our way platforms flagged and raised on vaults; also a black stone 4ft. long by 1ft. 10in. wide, with a border; inside the remains of an inscription, which did not appear to be Greek or Latin; it is nearly effaced. (See sketch.)

July 26.—This morning Goblan was to redeem his promise of taking us to the bridge of which he had talked incessantly before we came in the neighbourhood of it; but now something had evidently gone wrong, and he would not say where he was going to take us. One reason perhaps was that he had fallen out with his men, and only thirteen would go with us to-day. Apparently there was some breach of etiquette in going in this manner, without leave, into the land of another tribe, and several of the Adwân did not approve of it. At 7 a.m. we started, our men armed to the teeth, and apparently ready for a skirmish if one became inevitable.

We passed some Bedouin tents of shepherds; the women were spinning from camels' hair. We turned down a wady running south, and saw a ruin on a knoll to our left; reached it at 7.55; Alyadûdeh 100ft. square. There is here the remains of a building with bevelled stones and a circular arch, a small tower 12ft. by 20ft., also some more modern pointed arches, and several caves used as tombs: left at 8.10 a.m. We had passed over the burnt-up neutral ground, and now came across a vast number of tents: sixty in one encampment were counted, and some smaller encampments, but the fighting men were absent, only shepherds and women were about.

We now could observe that the hill Samach juts out to the south like an advanced work into the plain. We were fairly in the southern Belka, which is here called Sahlet Mahlâ: on our right we passed the ruins of Mablâ at 8.45 a.m., and again on our right those of Burazîm shortly after.

Goblan was now quite disagreeable, and wanted to know why he

should give the name of each place so many times over. It was useless for me to explain that after having seen one side of a hill, one could not tell it again from every other direction, so I left him alone, and tried some other men, and found that their knowledge of the country was in no way to be compared to that of Sheikh Goblan, and I think it probable that his position is as much due to his superior knowledge and power of observation as to his prowess in the field. As we jogged along, looking at the Arabs on their horses curvetting about, and practising with the lance, six gazelles started up, and there was a fruitless skurry after them, which partially took off Goblan's bad humour, and he became more sensible for the remainder of the day. At 9.5 we came on the conspicuous tel, Umm al 'Amûd, which can be seen for miles round, though it only rises a few feet above the plain. The ruin is about 100 yards square, and about it the ground is most fertile and partially cultivated. On some of the lintels lying about are plain mouldings, but otherwise there is little but cut stone to be seen. Took a round of angles to south-west, a black point Rajm Salîm; Shihan, a mountain two days off, of the black stone which is made into mill stones.

As Sûwakeh, a hill behind Ziza, a ruin with two towers very conspicuous. Zumlet al Alia, a long hill, and D. umm Shitta or Setthâ in front of it. Left at 9.55, and went fast over the plain to Aljabâyahât; at 10.20 a ruin; here ground appears lately to have been disturbed, as if the stones had been carried away. The hill seems artificial. Observed, and left at 10.53.

This was the most south-easterly point we were able to reach, for Goblan now said he could not undertake to show me the bridge, and so we went north-west towards Samek, for he said the tribe was coming up from the east with whom they were at variance, and the huge camp we had passed belonged to the shepherds in advance. At 11 a.m. we passed Wady Mâhala, and now Goblan became quite himself again, as he considered all danger had passed. We here passed sixty-four camels browsing. At 11.20 passed ruins of Mâhla and ascended Samak (11.40), which is about 600ft. above the plain. A cairn of stones on top, and some ruins; it is a long hill stretching to north-east; left at 12.8 p.m. 12.30 passed Umm al Khanafish again, and went along south of wady towards Tahîn. 1 p.m. passed ruin on left, which we observed to from Sâmak, and arrived at camp at 1.15, after a smart trot. The daily range of thermometer was now over 40°. This afternoon a troop of loose horses galloped over our camp and broke the wet-bulb thermometer. Left camp at 3 p.m. and visited and measured tanks at K. Sûk already described.

22nd August.—Took observations from 'Amâry. Left at 5.5 a.m., and rode to K. as Sûk, where there were still some measurements to take, and some photographing to be done, as two of the dry plates the day before yesterday had failed.

Left at 7.25, and shaped our course to north over an undulating

country, with wadies only faintly impressed. Passed the Merj al Hamâm, and the Arak of do., and at 7.55 came on a ruin of same name lying on north side of a wady. Took angles and left at 8.5. We now kept a little to the east of north, over an elevated ridge which proved to be the watershed of the country, and then followed the east side of a wady until we reached Tahîn. The wadies here, in place of running south to the Zerka Maain, all run north to the northern Zerka. To our west were two ruins called Mukâbalin on the west side of wady: here is the watershed separating the two Zerkas and Wady Nâûr, and name probably arises from their meeting together. Tahîn is an artificial mound on two terraces, and though of no great altitude is very conspicuous for miles round on account of its shape. A strong wind was blowing at the top, but a round of angles were taken.

We were now on a large elevated plain lying due south of 'Amman, which could not be seen. A vast number of ruins were scattered about here and also on the plain to the north of 'Amman. To our east and west hills intercepted our view. Several of the places have the prefix of thogret on account of their standing on a watershed. To our south-east were ruins T. Tusera, and T. Tasîn, and to north T. umm Ramadân. We left at 9.20, and made our way to north-east to al Kawassimeh at 11.5. This is a mausoleum standing on the foot to west of range of hills. It measures 25ft. square on outside; the entrance is to north, and the space inside 18ft. 3in. by 14ft. 3in., the walls to east and west being thick to support the vaulted roof. (See photograph No. 307, and plan and section.) Inside, a bench runs round to support stone sarcophagi. These are 7ft. long by 2ft. 6in. on outside. A cornice runs round at the springing of the arch. The people are a tribe of the Schûr Bedouins, friendly, but not connected with the Adwân, and they objected to our using the dark tent, as they said we were charming the treasure away. They were anxious to stone Corporal Phillips as a magician, and we had some difficulty in restraining them.

We left at 10.50, and passed the ruins of a large village, and the old road from K. as Sûk to 'Amman, and going north-west came on Assawâwîn at 11.5. A large ruin here: took angles and left at 11.15, going to north, the rock lying horizontal. We now passed a place called Arâk 'Aïsheh, where the rock is scarped and cut in steps for some distance, and passing across wady of same name arrived at al Muntâr 'Amman, the watchtower of 'Amman, at 11.45. Here is the remains of a mausoleum, with two sarcophagi resting on a platform raised 6ft. above the ground. Some mouldings are lying about. Left at 12 noon, and at 12.5 reached the brow of a hill from which we caught our first view of 'Amman, about 1,300ft. below us. We reached the bottom in a few minutes, and found our tents pitched opposite to the great theatre. Positions were selected for the camera, and during the next three days fifteen negatives were taken of ruins of interest.

29th August.—Left at 7.45 a.m. down the wady of 'Amman, 8 a.m. at point A, and in five minutes turned up a wady to south, the ruin of Mûrmûr on our left; reached it at 8.20, took angles, and left at 8.35; continued on spur of hill till we reached the ruin of Markab 8.45, took angles, and left 8.57; from here we saw another ruin, south-east, Kuryet al Markab; at 9.10 reached top of hill, where is a square tower with large stones. Left 9.30; went south, and at 9.45 passed tower on left and ruin on hill on right, all called by same name; at 9.55 got on to high hill, part of ridge running north and south, which forms a watershed. Point D: from here Wadies Katâr and al Kâfeh are seen to run east. Could see in the distance to east Jebl Zimlet al Adam, and to north of it Jebl Nawâsif; descended at 10.10 to south, and at 10.20 came across an old Roman road, and 10.45 a ruin near it; at 10.50, the cave or tomb of Umm Kâf, on side of hill looking south. Plan section and elevation of this tomb have been forwarded. The engaged columns, cut out of the rock, have Corinthian capitals. The interior has been used a second time by Saracens; there are ruins strewing the ground all round, and several sarcophagi; not far from us to east was to be seen the Haj route from Damascus. We had passed by several clumps of trees, but farther east there appears to stretch a great plain. Left at 1.30, turned to north-west, and passed some rectangular holes cut in rock at 1.40; and 1.55 another ruin, and at 2.13 arrived at Kawassimeh; continued to north, and at 2.35 passed Rajm Muttaba, and at 2.40 the ruins of K. Mansîyeh. Left at 2.45, and arrived at camp 3 p.m.

Amman.

This is fully described by Burkhardt, De Saulcy, Murray's Guide, and Tristram.

It must, however, be very different in summer to what it is in winter. There was now nothing offensive about the place, as the cattle only came down to the wady to drink, and otherwise remained in the plains above. A plan was made of the tower and castle above, and also of some of the buildings. The building called a church or cathedral in most books appears to me to have been a mosque, it is very similar in construction to the mosques elsewhere.

Some masons' marks were seen on the stones of an arch which had fallen near the junction of the two wadies near the "public promenade."

Thirteen photographs have been taken.

August 1 (Thursday).—Left camp at 7.15 a.m., and went up Wady Hadâdeh to north-west, passing the north front of the castle of Amman. 7.50 took angles from point A.

8.5 arrived at K. Hadâdeh, a small ruin on hill; took angles and left at 8.15. 8.25 came on another ruin of same name to north-west, and 8.30 to a ruin (name unknown) on east side of wady. 8.40, K. Urjan, took a round of angles and left 9.5. We had been moving north up the wady. We now continued east along the hill-top till we reached a ruin

at Jaranîn, angles taken, and we left 9.40; we now turned north-west, passing er Rawâk on a spur at 9.45; at 10.10 we reached a high hill, Birkeh, from whence we had a good view in all directions, but especially to north. The mountains of Ajlûn could be seen, and the guide pointed out Jarash, but I could not distinguish it, and am not certain that he could. The bearing, however, to the place to which he pointed is 354°, and is very nearly the bearing of Jarash from this point on my plan. I mention this because it would be an important line to obtain when the survey is commenced. I also observed to some places to east which were not visited—viz., Dhahret al Muktâ, Rajm ash Shûk, and al Kâû. There is also a ruin to north, about one mile, called Halâlâfîyeh. On this hill are layers of flint and nodules cropping out. Left at 10.30 a.m., and passed to west-south-west along the southern ridge of hills, and at 10.50 to our right by one mile was Aljabâyahat, a ruin in valley with trees, and little farther on at one mile and half to right Telaût al Ali, a small hill; at 11.7 we passed Keseret Thograh on right, and shortly after Umm ad Dûbbâ, also in valley to right; we also saw Umm as Samâk (No. 3), a low yellow hill to west by two miles. At 11.20 we ascended the conspicuous hill of Ash Shamâsâny, from which is a most extensive view. I here took angles with theodolite to more than thirty hills and ruins. To the east of this a few hundred yards is a lower peaky-tipped hill, very like it and without a name; as it always follows Ash Shâmâsany in the rounds of observations from other places it is booked as "hill like it." Our observations included angles to Al 'Aâl and Nibbeh, of the identity of which we were not quite certain. Lunched, and left at 1.15. Continued south on spur between two wadies. To our left were two low hills called Sakrah and Kusara. At 1.20 passed Shibhâ (took angles), and at 1.40 Rajm Armaga, half a-mile to left; at 11.50 Es Sawâfyeh, half a mile to right; turned now to east, and on our left Jâhăsa, and close to it Hawâyeh, and at 1.55 Rajm Omar abu l'Makhâmar; arrived at Abdûn at 2.15 (a few trees here), took angles, and left at 2.40; went south, and at 3 p.m. came to ruins, Rajm abu M'awâîdeh; to east of Abdûn was Wâbideh, and in the valley some caves. At 3.20 p.m. passed to north near Malfûf (a ruined circular tower), and then turned down Wady Hemar, and arrived in camp at 4.15 p.m. The country visited to-day is nearly bare of trees, but is a mass of ruins, and the ground has in some places been terraced for miles.

August 2nd (Friday).—Struck our tents and left at 6.50 a.m.; passed the head of the river of Amman at 7.25, and continued up the wady; at 7.40 passed Wady Hemâr, coming in on right, and Wady al Arnab on left; at 7.55 Wady Abdûn enters on right, and at 8.10 Wady Makabâlîn on left: at 8.15 the wady takes the name of Shankeh, and Wady Umm al Wasset runs into it on right. We followed up this latter, passing the ruins of Wasset, and 8.25 Jebb Maîseh was on our left; on our right was Jebl Hemar, and beyond it the wady Deir Akaba; at 8.50 we mounted the hill and reached Maîseh, took angles,

and left at 9.15; passed Maksar al Bakera, and in ten minutes more arrived at an Nawablissiyeh (a piece of ground in connection with Nablûs), took angles, and left at 9.30; passed over a plain to north-west, and arrived at Khurbet Sâr at 9.55: there are here several ruins—the remains of a mausoleum with arches something similar to those at K. Sûk in style; also a square tower of a hard flinty stone.

We now continued to north, and Goblan said the camp of the chief of the Adwân was close by, and wanted me to pay him a visit. I had several objections, but at last agreed to go for a few minutes, as Goblan said he must go. He then asked me what present I had brought for Sheikh Diab. I said I had nothing. He proposed I should give him one of the small revolvers I had about me. To this I decidedly objected. He then enumerated the horses and guns that had been given to his great chief by the European visitors who had been in the country. I only observed that he had bargained to take me through the country for a certain sum, and that if his chief was likely to be angry with him, he had better give him his mare; this elicited a ghastly grin, and he said no more. We passed over the plain and came to the ruin and tree of Sujret al Kursey; here was the great encampment of Sheikh Diab, at that time in arms against the Government.

Most of the tents were of a larger size than usual, but there was one very long one open to the east, in which were sitting some fifty Bedouins. As we approached, the old veteran came out to meet us and gave a hearty welcome. He introduced us to his son, an exceedingly handsome man of about thirty years, and also to some of the minor sheikhs, and then plunged into a conversation about the approaching Turkish army, asking me innumerable questions as to how we managed such matters in my country. It was evidently a question whether he would submit or fight it out, for a relation of his was with the Turkish army who could act as guide in all the difficult places, as he knew the country well and all the granaries. I rose to go once or twice, but coffee had not appeared, and they said I must wait for that; but after about an hour and a half I could delay no longer. On my rising, Diab said he had killed a sheep for me, which already was half cooked, and so I must stay. It took at least three hours, and was quite late in the day before our feast appeared. We had breakfasted so early we felt famished, and tucked in with a will to the dishes of rice, sheep, butter, sweetmeats, and everything else that was put promiscuously before us, and felt no inconvenience at eating with our bread and fingers. After we had finished, the assembled party set to and soon demolished the greater part of what we had left, but considerately left a little for the children, who were turned loose on the dishes, and licked them clean.

About 3 p.m. I said it was time for us to go, and then Goblan again asked me about a present, in front of Diab. He wanted to get me to give the revolver, but in spite of the soothing effects of their hospitality,

and dinner, I was able to steel myself against what I considered to be an imposition, and told Diab I had brought nothing for him; but that if I saw anything in Jerusalem when I went back that I thought he would like, I would send it to him. Goblan took a small present from me to Diab on our return to Jerusalem. Although the Bedouins are bound to feed one gratis by their own laws, yet I always feel a certain amount of compunction in receiving anything without giving an equivalent, because of our civilised customs, which forbid one treating them in return as hospitably as they treat us: thus, when Goblan comes to see me, I can't ask him to dinner, or into the drawing-room, but give over an outhouse to his use, and supply his bed with carpets from the floor; and even the carpets I begrudge, because they have to be hung up out of doors for several days after a visit for fear of vermin having been left on them. It was on that account that I did not wish to feed with Diab, for I knew that at the least it would cost three pounds sterling, and lose me half a day's work. We left the old sheikh at 3.10 p.m., and Goblan, with much pomp, took me to see a sculptured stone hard by. It proved to be part of a stone which had been used as the mouth of a cistern, and the ropes had cut it up a good deal. There was nothing remarkable about it. We now came down south alongside the ridge, and winding down the side of it to west, arrived at the fountain head of Wady Seir at 4 p.m. Here was our camp. We were now in a totally different country; as far to west as el Kursey and K. Sâr, the country beyond Amman is, generally speaking, a plain with shallow wadies, and without trees, with numerous flocks of sheep in all directions. To the west of Kursey and Sâr the plain terminates and shelves down into Wady Seir, and now commence a series of wadies, breaking up the country into a mass of hills; these are covered densely from top to bottom with a kind of oak-tree. Near our camp the Seir is joined by two other wadies, Ady Dyalâmeh and ad Dâlyeh. A hill to the north is called Karm abu Sheibân, and ruins of Motul as Sŷreh and Seir are close together. Neither of these were seen.

I now sent Corporal Phillips down the wady to examine a rock tomb said to exist there, and went myself to take a round of angles from a hill to south of our camp; from hence we could see Neby Samuel and Jerusalem, but few places to north or south for longitude, and this was the constant difficulty on this side; the latitude could be got very accurately both by sextant and by reference to known points to west of Jordan, but there were few conspicuous points to north or south. We returned to camp at sunset.

Corporal Phillips returned soon after dark; he had been away about two hours, and had reached the tomb after a sharp trot of forty minutes. It is down the Wady Seir, and he supposed he had been close to Arak al Emir, but he saw nothing of it. The rock is scarped, and there are seven windows—the four upper ones have cross-bars to them, cut out of the rock, the three below are plain. There is a narrow door at the bottom; inside, the chamber is about 12ft. square, and divided into

two by a wall running up the centre; there were originally three floors, of which only the two cornices now remain for supporting the joists; on the upper one pieces of wood were now resting, on which the shepherds made their beds. On each floor are seven rows of pigeon-holes cut in the walls on every side; they are triangular (no measurements were taken).

The wady, as far as they went, is clothed on either side by dense masses of oak; a little below the tomb a solitary olive-tree was noticed.

3rd August (Saturday).—It was necessary for us to go to Jarash before the arrival of the Turkish troops there, so we started this morning; but first I wished to connect the work with Arak al Emîr again, so as to complete the circle. Left camp 7.30 a.m. and went south, ascending the wooded hill instead of turning south-west down Wady Seïr. On getting up to top turned to south-west, and at 8.20 came to Shajaret adh Dharâá; angles; close to were ruins, K. Sáâdeh and Talaát ar Rîmeh. We could here see the junction of Wadies Bahâr and Eshteh. Left 8.30; at 9.10 angles; passed near K. al Fahs at 9.40, and at 9.56 Dajâjeh; passed Dubbeh, and arrived at a point overlooking Arak al Emîr; took observations there with theodolite, and left at 11.20 a.m.; turned round now and came back by K. Sâr; arrived 12.30 p.m., and left 1.30; passed on to al Kursey, and found that Diab's camp had disappeared; Berket al Amûd at 1.55; angles; here there is a dry pond, with a pillar in centre; left 2.15. The country now changed, and we rode through fields of Dhurrah to Dabûk, still going to north; arrived 2.35; angles. Half a mile to our right was Umm ad Dubbeh.

We were now in a forest of a kind of oak, and the soil sandy. Left at 2.50, and at 3.15 passed a ruin; after this we found our camp at 3.45.

'Ain Hemar. From here as Salt is only a few hours, and I sent Corporal Birtles for letters. I went up to top of hill near to observe with theodolite.

The view from these hills to the north is remarkable; 1500ft. below us an oval depressed plain, nine miles long and six broad, giving about forty-five square miles of the richest meadow land. It appears to be the dried-up bed of a lake whose waters have cut their way to the Zerka years ago by Wadies Umm ad Danâur and ash Shaleïby on the north-west side; it is called al Bukâa, and lies north-east and south-west. There are several ruins on it, the principal being K. al Bashâ, Am Mûmîn, and Mukhna; the hills rise round to about 600ft. or 700ft.

To the west a broad wady runs in, Wady Hôr, on which are the ruins of abu Tineh; further to north-east are Aljîah, Khanazîr, and al Yadzîdîyeh, and on the other side of Wady Umm ad Danaûr is Talûz, and opposite to it on the other side of the Bukaa, half-way up the hills, is a ruined town called Môbus.

Below us on the side of the hill is the spring of Sufût, and to east lower down a ruin of same name, and at the foot of the hill some distance to east 'Ain abu Naseïr.

5th August (Monday).—Left camp at 7.35 a.m., and gradually ascended

the hill on north, till at 7.45 we stood on the ridge running east and west, which on the north side runs down steeply into the Bukaa, and to south falls gently to the 'ain, and causes its waters to flow into Wady al Azrak, and thence to Wady ash Shaïb. Where we stood was a ruin on a flat-topped hill called ar Râha, near a conspicuous tree, Shajret al Halanaïteh, or Hayanaïty; this tree has been observed too from Jebl Hûsha. The ruins are formed of rough stones from the hill-side. We had a fine view of the Bukaa, kept along the ridge to east till 8.20, took angles, and left 8.35; descended towards east till 8.55, when we reached the spring of Safût. At 9 a.m. came on extensive ruins of same name. The principal object remaining is a gateway 8ft. high and 7ft. 6in. wide, with a lintel over it, called the Gate of Amman (see sketch); there are bevelled stones about. Near here Goblan says he has lately discovered a series of rock-cut chambers, seven in number, opening one into the other. The hills we passed over were observed to have trees only on north side, probably on account of the heat of the sun. In the same way in the desert of Judea, in the early spring, the hill-sides to north are green and bright with flowers, while to south they are quite brown. Left at 9.10, and passed the Wady Safût, where is a trickling stream, the sides of which are bright with variegated sand stone. Passed now to north, and at 9.50 reached al Bashâ, nearly in the centre of the plain, the remains of an extensive village or town of soft stone. There are some vaults about; the plain here is well cultivated in parts, and elsewhere swarms with flocks of sheep and goats; took angles, and left at 10.5. Kept up along west side of plain, leaving Makhna on the left, and at 10.50 arrived at Am Mûmîn, where is a large terebinth sheltering a holy spot of unhewn stones; the ploughs, &c., of the fellahîn were here heaped up in safety; took angles, and left 11.25. Continued to north up a wady after we had passed through the plain, and arrived at Thoghret umm Ghafreh at 12.5; left at 1.0, and went down to Wady Rumân, with water in it, at 1.50; the country here becomes wild, the rocks perpendicular in some places.

At 2.20 came to 'Ain umm Rabîa, and at 2.35 passed between the hills Mustâba and Asnâmeh: from here we could see Jarash very plainly: left at 2.50, and descended rapidly to Wady az Zarka, where we found our camp at 4.20 p.m. Here the Rev. W. Baily joined us from As Salt.

The Zarka is here a rapid muddy stream lined with rushes, flags, and oleanders, so that the water can only be seen here and there: there are several tributaries from the northern side, among others Wady Yarta tumbles in a vast amount of water: there are several ruined mills about. The valley here is about 100 yards wide, with a nearly level space at bottom. The heat was excessive.

August 6.—Left at 7.15 a.m., and ascended the hills to north, and passed ruins at 7.22; left 7.32: on our left was a hill, Mejdel; there is another Mejdel several miles farther to west, near Hemta. 7.45, arrived at a ruin al Ghazâl, and at hill of same name 8.17.

Left 8.30, and arrived at Jerash at 9.30 a.m. On our right was a conspicuous hill called Mazâr, with a wely on it.

On our arrival we found a party of fellahîn from Sûf waiting to take us on, as they had heard of us, and supposed we were going north. As the Adwân dare not remain openly at Jerash, we were put partially under the care of these people, but sometimes we were left without any guard at all. Goblan used to come back at nights and stay a short time. At this time the troops were a very short distance from Jerash, probably less than four hours.

I had not with me the works of Burkhardt and Buckingham, which I regretted very much at the time, as their plans would have helped me to distinguish ruins which no doubt are now very much more damaged than they were fifty years ago. We spent nearly three days at Jerash itself, and, though we were at work from sunrise to sunset, there still remained much to do when we left. The plan of the town and detail plans of the buildings I forwarded home in November, 1868. For the general plan, two lines were measured from the bath-house to the Temple of the Sun, and from thence to the small temple. From the two first points rounds of angles were taken with the theodolite, and the work was plotted on the two lines. The bearing of each side of the city wall was taken with prismatic compass, and also angles from some prominent points. With the exception of just round the small theatre the work plotted very well; at this point it is a difficulty to see where the city wall originally lay.

See general plan; northern theatre front to north:

2. Temple of Jupiter, plan $\frac{1}{120}$.
3. Southern temple, plan $\frac{1}{120}$.
4. Triumphal archway, $\frac{1}{120}$.
5. Southern theatre, with details.
6. Pedestal at cross-streets.
7. Ruins Khan on east side of river.

Seventeen inscriptions were found, of which only five or six appear to have previously been published.

Two of them are very long ones and are nearly perfect. Six of them are the inscriptions over the gate of the Propyleum; three of these were exhumed by our party from under the ruins.

The photographs are thirteen in number, and taken of the most important objects.

Corporal Phillips experienced great difficulty in his work on account of the heat which caused his bath to split up: he lost one day's work through this.

No. 323. Views of northern theatre from north, with columns of Temple of Jupiter behind.
„ 324. View from near the bath-house, looking south.
„ 325. View of street from near bath-house, looking north.
„ 326. West side of street south of the Propyleum of Temple of Jupiter.

No. 327. Propyleum of Temple of Jupiter: among the fallen voussoirs were found the inscriptions.
,, 328. Columns of Temple of Jupiter or of the Sun.
,, 329. View from southern end of Forum showing street and Temple of Jupiter in distance.
,, 330. Southern theatre, view looking west.
,, 331. Triumphal arch, south side.
,, 332. Bridge and large Khan.
,, 333. Southern Temple, view looking south-east.
,, 334. Oval of columns (Forum) at south end of street.
,, 335. Inside of Propyleum.
To show an ugly break in the line of columns.

The caves and tombs round about were examined, but nothing remarkable was found.

The wely of Neby Hûd at Mezâr was visited and angles taken from it: it is distant fifty-five minutes from bath-house, Jerash.

So much has been written about Jerash, and there are such good accounts by Burkhardt, Buckingham, and Lindsey, that I have thought it unnecessary to do more than enumerate the plans and photographs taken.

The young sheikh of Sûf paid me a visit and wanted to take us on up the country. He produced a heap of certificates, which were to the effect, "Don't trust this man, he is a rascal." It was amusing to see how anxious he was to prove that they did refer to him, though many of them must have been written before he was born. He evidently prized them very highly.

August 9.—Goblan had left some men of Sûf to guard us, as it was not safe for him to remain. With these we started, leaving the gateway of Jerash at 12.40 p.m., and turned over the hills to west. On our right was a ruin called Deir, and at 1.3 we arrived at a ridge, from which an angle to Jarash could be obtained. The ruins of 'Alâmâmy bore due south from this point. Left at 1.12, and at 1.40 arrived at the ruined village of K. Najîb. We were now in a well-cultivated country; oak-trees scattered about, with here and there a patch of olives, the vacant places being sown with corn. Left at 1.40, and passing the ruins of a convent to our left, arrived at 'Ain Kitteh at 1.55; here was an abundant stream, the banks lined with water-cresses. The olives about here have the same red-berried mistletoe growing on them as they have at Jerusalem. We now went up by Kuryet Kitteh (probably Tekitty of Robinson's List), a village consisting of a few houses, now deserted, and wely; beyond were fig-trees laden with fruit. We now continued descending till, at 2.20, we passed Wady Nakleh, a small stream fringed with oleanders. A short distance to north were ruins of same name; farther north, and up the steep wady, were to be seen the villages of Reimûn and Sâkibeh. On crossing the wady we found ourselves in a wood of stone pine, covering the southern sides of the hills. At 3 p.m. arrived at Dabîn, where were some stone olive mills;

the country was carefully cultivated. We had now a difficulty with our men of Sûf; they appeared to think that we were in their hands, and must go where they choose. I told them to be off, and turned up the hill Hakât (?) without them. It was hard work getting up, on account of the steepness of the side and the growth of underwood. On reaching the summit we found it bare of trees, and commanding a fine view to the east; but to the west, it continued in a succession of small peaks, for several miles apparently, so that we had no view in that direction. Nighdeh appears to be one of the western peaks. This line of hills is a remarkable feature in the country, and is somewhat higher than the Jebl Husha range.

A high wind was blowing at top from south-west. We arrived at 3.20, took a round of angles, and left at 3.35; turned down the hill to south-west, through a park-like scenery, at 4.45 passed a ruin (Jazâzeh), and at 5.25 turned down a wady, which in a few minutes opened into a glade, in a vacant part of which our camp was placed. Near to us was an 'Ain Kajazeh (?); on all sides we were hemmed in by trees, so that it was only with great difficulty that I could fix our position. Goblan and party were waiting for us, but they were still in a state of trepidation, and wished to put the Zerka between themselves and the enemy. On telling him how badly the men of Sûf had behaved, he only expressed his astonishment that we should have been able to get rid of them without paying a high bakshish, as they have a bad reputation. This seemed rather good after his having put us under their care, and I refused to pay them a farthing, as that was Goblan's business. I do not think they got much out of him.

August 10.—Left at 8.15 a.m.; went west to top of a small hill three-quarters of a mile from camp, whence we saw the ruins of K. Kajâzeh to south-east, and Hemta, near the hill of Mejdel (a second of the name to the west of that near Jarash); also a three-peaked hill, Dhahret al Maktal, and also beyond the Zerka, in the distance to south-east, where Tels al Haddâd and al Aâsy. Left 8.45; at 9 came to point *b* on hill; from here we could see Wadies Remîn and Salâhy, coming together into the Zerka from south; and farther to east, Wady Rumân. Left 9.10, in five minutes came to village of Burmeh, where there are many olive-trees; we had previously been passing through oaks and pines. Passed ruin of Fawâr, and at 9.35 turned down Wady of ; at 9.55 reached fountain of same name; 10 a.m., took angles up Wadies Rasûn, al Kareith, and al Gusneh, on southern side of Zerka. Left 10.30, and at 10.55 reached the bed of the Zerka. Here a photograph (No. 336) was taken of the banks of the Jabbok, with reference to 32nd chapter of Genesis.

A strong wind blowing from west.

Left at 12.50 p.m., and reached the first plateau at 1.10 p.m. To east was Wady 'Alâfâny, and into it runs Wady Mashâfeh; on either side of us were the plains of Sawâliheh and Ardheh. Left at 1.40; at 2.25 arrived at Jalâûd, where there is a spring of water; and at 3.8., al

'Alan, a miserable village. Left 3.30., and passed a fountain; at 3.50 surmounted the third terrace, where are the ruins of Dzi; and at 4.50 arrived at fourth plateau. Near here is Wady Rumeinûn, and to south is Tel Mahîs. Arrived at camp, at wely of Jebl Hûsha, at 5.5 p.m. The country we had gone through between this and Jarash is beautifully wooded, and the atmosphere seemed quite to have changed. While we were in the bare country there were no clouds above us; but directly we came among trees, we found clouds constantly forming above our heads, and shielding the sun's rays from us, and at the same time we could see there was still clear sky over the barren ground.

12th August.—From the summit of Jebl Hûsha there is probably the finest view in Palestine; perhaps that from Kaukaba near the Jisr Mejamia may be equal to it. It was hazy yesterday, and our observations were not very extensive, but this morning we could see every point in the Ghor and opposite hills most distinctly, though many were thirty miles off. Took a round of angles and left the wely at 8.43 a.m. Turned along the ridge of the hill south-west, and looked down on the Wady Hamâm, which springs at 'Abhereh, below us, and flows into the Jordan with a never failing stream. Where it joins the Jordan there is (Jazîreh) an island; on the western side the Wady Mudahdahreh falls into the Jordan below the Wady Faseïl and only flows during the rains. Near the Dead Sea we could see Wadies Jerefeh and al Aádhâm, flowing into Jordan from east. Wadies Mâhîs and Azrak fall into Wady Shaib below as Salt from east. Beyond as Salt to east were two hills, Jelûdy and Shagret at Tûb. Wady ad Dâris runs down the side of the Jebl Hûsha to our south towards the Jordan. We left point A at 9.25, went south, and passing a Christian village, Fuheis, arrived at hills called Bataneh at 11 a.m. Took angles and passed to east, reached a spring at 11.45, and our camp just below as Salt at 12.10; it was pitched close to an 'Ain of Jâdûr. Near us was a ruined church of St. George, Kanîset Sarah. We went and took a round of observations with theodolite from castle. Photographs Nos. 339 and 340 were taken of the town, and No. 338, of a flock of goats near the 'Ain waiting ready to be watered, and crouching under the shade of rocks from the mid-day sun.

13th August.—Left at 8 a.m. Went down Wady Shaïb at 8.27, passed a gully to our right, and at 8.30 'Ain Jazîr; passed some triangular caves or cuttings in the rock, and 8.40, K. Sûk to our right. At 8.43 the ruins of Jazîr were on our left, and beyond, up the Wady al Azrak, the bridge Khaidhar, and ruin of Abu Târik, also hills al Ghundeh and Um Aâwyeh; passed W. Hayreh and turned over the hills to the east, and then descended to bottom of Wady Maheïs. After ascending 600ft., we arrived at the 'Ain Maheis; from here there is a beautiful view of Dead Sea, and up the Ghor as far as Agarab. Left at 10.40; came round to west by Bîr as Sabîl; took angles from point C at 11.30, and at 12.15 arrived at Fuheïs; left at 1.20, and passing through a dense forest of oak, descended to our camp at Thoghret as Sujûr at 2.50 p.m.

We had passed through a lovely country after leaving Wady Shaïb, through groves of oak-trees with enormous acorns, plenty of water and flocks of goats in every direction. We had passed a good deal through a sandstone formation on which trees appear to flourish. Our camp was on a thoghret from which one wady ran direct to N.W. into Wady Shaïb, the other ran down to south of it, and parallel. We had heard volleys of musketry during the day to our east, and Goblan getting anxious, got leave to go and see about it.

14th. August.—I had a difficulty with the sheikh who was left in charge by Goblan. He came into my tent and sat down quite at his ease, and would not take any hint, so he had to be shoved outside; he then had a row with the dragoman.

Started at 6.30 a.m., down along the left bank of Wady al Idzam, which runs into the Kafereïn, near Hilâly. On our right were two hills on either side of the wady, close to us on left bank Talaat Rîmeh, and on right bank Arkub al Khatal. We soon left behind us the forest of oak, and rode among tall thistles six to seven feet high. At 7.5 got into the plain of Emîr (point A), and at 7.30 reached 'Ain Jeryah, where we found Goblan and some of his party waiting for us. Left at 7.40 and passed down wady of same name; crossed it at 8.15, and began to ascend some bare hills to south, and at 8.40 Hilâly bore due east. We now descended a wady very gently, and at 9.10 found ourselves in Wady Hadâr, and at 9.20 reached the mouth opposite to Tel Kafereïn. Arrived at a place fixed on for our camp at 10 a.m. Continued on to south, passing Ar-Ram, where a round of angles was taken from the sheikh's tomb, which surmounts the artificial mound. We now passed through irrigated fields till we crossed W. Aádham, and reached Suwaimeh at 11.45. The 'Ain keeps up a steady flow of rather brackish water throughout the year; the ruins are some 300 yards to the west, and appear to be of no importance. Left at 1.20 p.m., at 2.10 crossed into watered country, at 3.10 passed Ar Ram, and soon after came on a camp of the black inhabitants, who insisted on our dismounting and drinking leban.

In the afternoon angles were taken with theodolite from a spur on the hill-side south-east of Tel Kafereïn. Goblan did not like to start till it was well dark. We left at 8.20 p.m., and as there was no moon our cavalcade was somewhat solemn. At 10.55 we arrived at the Nuwaimeh ford, and got all over by 11.43. We could not pass by er-Rîha, as there was a small army from Jerusalem encamped there, to support those on other side, so we made our way to 'Ain Hajlâ, passed Wady Kelt at 1 a.m., and arrived at the 'Ain 1.30 a.m.

There was no time to pitch our tents, so after getting some food we lay on the ground and were up at 4 a.m., in time to take a round of angles at sunrise. Left at 6.50, and arrived at Dead Sea at 8.15; spent some time in looking for the survey bench mark which had become buried in sand, and arrived in Jerusalem in the evening.

List of Places Visited or Seen Agreeing in Name with those in Dr. Robinson's List.

Dr. Robinson.	
Dibbîn...	Dabîn
Tekitty	Kitteh
Reimûn	Reimûn
Sûf	Sûf
Jezzâzi...	Jezazy
'Amâmy	Alámâmeh
Deir el-Lih... ...	al Helleh
Jerash	Jarash
en Naby Hûd ...	an Naby Hûd
Nejdeh	Najhdeh
Burmeh	Burmeh
Râjeb	Râjeb
Nukhleh	Nukleh
Hemta...	Hamta
al Jâdûr	'Ain Jadûr
Khirbet es Sûk ...	Khirbet as Sûk
Batneh...	Bataneh
Mâhis	Mâhîs
el Fahas	al Fahs
Khirbet ed Deir (in Wady es Seir)	ad Deir
Khirbet ed Debbeh	ad Debbeh
Khirbet Sâr ...	K. Sâr
el Kursey	al Kursey
'Arak al Emîr ...	'Arak al Emîr
es Suweifîyeh ...	as Sawâfyeh
el Murŭssŭs ...	al Marsâs (?)
Tâûr	Nâûr
Burâzîn	Burâzîm
Hesbân	Hesbân
el 'Âl	al 'Aâl
Abu en-Nemel ...	W. abu 'Nnemel
Neba	Nabâ
Mâdeba	Madiyabeh
Mâsûh...	Mâsûh
ed Dulcîât	Dalâleh
Mâîn	Mâain
Um er Rŭsâs ...	Um ar Russas
Habîs	W. Habîs
Tîhîn	Tahîn
Um Sweiwîneh ...	Sawwâneh
Kureiyet es Sûk...	Kureiyet as Sûk
Kureiyet el 'Amâîry	K.al Amâry

Dr. Robinson.	
Abu Nŭkla... ...	K. abu Nukleh
Um Kuseir	Umm Kisîr
Jâwa	Jawâyeh
el Yadûrah	J. al Yadûreh
el Beniyât	Benâyet
Um al Hamâm ...	al Hamâm
el Khŭrmân ...	Khamân
Um el 'Amad ...	K. Umm al 'Amed
Um Kuseir	Umm Kisîr
Ziza	Zîzeh
Jelûl	Jalûl
Ahjera...	Belâd Ajhâr
Khirbet al Bâsha	al-Basha
Sâfût	Safût
Abu Tîny	abu Tîneh
el Mîseh	Mîseh
et Fuhais	Fuheïs
ed Deir	ed Deir Akaba
Dâbûk...	Dhâbûk
er Raha	Arrahâ
el Kemâlîyeh	Nisbet ash Shamâlîyeh
Um ed-Dŭbâá ...	Umm adh Dhibâá
al Jebeiha	
en Naweikis ...	Kasr Nawakîs
'Ammân	'Amman
'Arjân	'Urjan
al Haddâdeh ...	W. al Hadâdeh
Um Semâkeh ...	Umm as Samâk
Khuldeh	Khaldah
er Rŭbâhiyât ...	Aljabâyahât
es Sîreh	Matul as Sŷreh
'Abdûn	Abdûn
al Mukâbelîn ...	Mukâbalîn
Zi...	Dzi
'Allân	'Alân
Meisera	Meisareh
Um Jauszeh ...	Um Jûseh, or Jûdeh
Jelûd	Tel al Jalûdy
Rumeimîn	W. Rumeimîn
Lezîdîyeh	al Yazîdîyeh
ar Rummân... ...	Umm ar Rummân
es Selîhah	W. as Sulâîhy
Mûstûbeh	Mastăbeh

HEIGHTS OF ONE HUNDRED AND FIFTY POINTS TO THE EAST OF JORDAN.

THE very valuable set of bench marks cut by Captain Wilson on his line of levelling from the Mediterranean to the Dead Sea, furnish a series of data without which the heights deduced from the readings of the aneroid barometer would be uncertain in the extreme.

In the present instance, each bench mark on the western side of the Jordan, coming down from Jerusalem, has given an efficient check to the observations taken on the eastern side.

These observations consist of readings of three aneroid barometers at the principal points met with during a month's surveying, and were there no other disturbing influences than those which affect the standard barometer, the heights obtained ought to be accurate to a very few feet. I noticed, however, with regret that, either owing to eccentricities in the make of the instruments, to the extreme heat, or perhaps to the rapid transition from one altitude to another, there was greater variation in the readings than is due to the diurnal range or other alteration in pressure of the atmosphere, as obtained from readings of the mercurial barometer at Jerusalem, and this was the more apparent because where our barometers were stationary for a day or two in camp, the oscillation corresponded to that at Jerusalem.

The barometers did not even keep relatively together well, perhaps because one was more sluggish in its movements than another.

As an extreme instance of the difficulty met with, I may mention that in passing rapidly from the Pilgrim's Ford to the Dead Sea, the barometer stood 30·95 at the ford, 30·9 at mouth of the Jordan, and 30.86 at about two miles to west, on level with Dead Sea, making more difference in about two hours than is due to the greatest daily range, and at the same time we had descended about 50ft.

I therefore think that any of the heights (except 'Ain as Sultân) may be out to as much as a 100ft., but not more, and if so they are (thanks to the O.S. bench marks) as near as, or nearer, than those averages on the western side published in Van de Velde's very useful memoir of 1858.

ITINERARY ON EAST SIDE OF JORDAN. 1867.

Altitude in Feet above Mean Sea Level of Mediterranean.

18th July, 1867.		Feet.
6.30 a.m.	Left 'Ain As Sultân	- 730
9.20 ,, 10.50 ,,	Jordan ford of an Nwaimeh	- 1160
11.15 ,,	Upper plain	- 1020
12.0 noon	Irrigated ground...	
12.30 p.m. 3.0 ,,	Mound of Nimrîn	- 630
4.0 ,,	Mound of Kafrëin	- 530
19th July.		
7.8 a.m	Left, near bottom of Mound	- 630

		Feet.
7.40 a.m.	Warm Spring near Wady Al Mashâîdeh	– 580
8.42 ,,	Point B	– 440
8.56 ,,	Wady umm 'Adsis	
9.30 ,,	Point C	– 120
9.50 ,,	Point E, Wady Sûr	250
10.36 ,,	Point F, on Watershed	800
11.2 ,,	Khirbet Sûr	1040
11.20 ,,		
12.15 p.m.	Top of ridge	1690
12.20 ,,	Arak al Emîr, ruins	1400
	Top of hill, S.W. of ruins	1940

20th July.

8.15 a.m.	Left Arak al Emir	
8.40 ,,	Point A	1700
9.0 ,,		
9.38 ,,	Point B, crossed bed W. Bahâr	1010
10.10 ,,	Top of Nînî	1760
10.45 ,,	Point C, Jebl Jabûs	2700
11.10 ,,		
12.5 p.m.	Near 'Ain Hesban	2300
	Ruins of Hesban	2950
	Bed of Wady near Shunet	1920

22nd July.

7.30 a.m.	Left 'Ain Hesban	
7.45 ,,	Shunet Sakk	2200
7.58 ,,	W. Ahdlheîl	2150
8.7 ,,		
8.30 ,,	Bend in W. Hesban	
8.35 ,,	'Ain Bûwarideh	17200
8.40 ,,		
8.45 ,,	'Ain of same name	
8.56 ,,		
9.10 ,,	Point	1770
9.20 ,,		
9.45 ,,	Left our horses	1090
9.55 ,,	Kulat umm abu'l Hussein	1070
10.30 ,,		
11.6 ,,	Point F	1640
12.20 p.m.	Crossed W. Mûsa	1440
12.27 ,,	Camp near Ayûn Mûsa	1570
	Lower head of Ayûn	1590
3.55 ,,	Left camp	
	Lower head of Ayûn	1590
4.17 ,,	Town of Neba (ruins)	2300
	Hill to South	2300

23rd July.

8.0 a.m.	Left camp	
8.30 a.m.	On plateau, Belka	2400
8.55 ,,	Ruin al Kafir	2680
9.10 ,,	Christian (?) ruins	2600
9.50 ,,	Al Turkmaniyeh (footprint)	
10.50 ,,	Point D, Madiyaba on left	2680
10.27 ,,	Rock, al Siât	2730
10.40 ,,		
11.15 ,,	Mââîn	2785
1.30 p.m.		
2.40 ,,	Footprint	
2.50 ,,	Christian ruins	
3.25 ,,	Jebl Neba	2650
3.36 ,,		
	Highest point of Jebl Neba	2770

24th July.

6.50 a.m.	Left camp	
7.50 ,,	Watershed	2450
8.0 ,,	Plain of the Belka	2350
8.5 ,,	Jebl Mushkar	2610
8.12 ,,		
8.50 ,,	Jebl as Sawwâneh	2790
9.5 ,,		
10.10 ,,	Al 'Aâl	2960
	Ten minutes delay.	
11.25 ,,	Beit Zara	2820
11.30 ,,	Umm al Khanafish	2690
12.0 noon		
12.45 p.m.	Abu Nukleh	2940
2.30 ,,		
2.35 ,,	K. Balâith	
3.5 ,,	Watershed	3080
3.25 ,,	'Ain Nâûr	2430

25th July.

7.5 a.m.	Left 'Ain Nâûr	
7.35 ,,	Al Awâly	2990
9.7 ,,		
9.22 ,,	Umm as Samâk	
9.47 ,,		
10.5 ,,	Benayet	2940
10.20 ,,		
10.40 ,,	Point A	
10.52 ,,		
11.12 ,,	Camp at Bîr of Amâry	2740
1.30 p.m.	Left camp	
2.0 ,,	Rajm Moyis	2870

26th July.

7.20 a.m.	Left camp, Amâry	
7.53 ,,	Al Yadûda	2760
8.10 ,,		
9.5 ,,	Um al Amûd	2660
9.55 ,,		

		Feet.
10.20 a.m.	Aljabâyahât	2340
10.53 ,,		
11.40 ,,	Sâmak	2880

27th July.

7.55 a.m.	Ruin Hamâm	2900
8.5 ,,		
8.45 ,,	Tahîn	3010
11.5 ,,	Al Kawassimeh (10 minutes)	2870
12.0 noon	Al Mûntar (15 minutes)	2810
12.20 p.m.	Camp Amman Theatre	2500
	Greek church	2750

29th July.

7.45 a.m.	Left camp	
8.20 ,,	Mûrmûr	2600
8.35 ,,		
8.45 ,,	Merkab	2920
8.57 ,,		
9.10 ,,	Top of hill	3140
9.30 ,,		
9.55 ,,	Top of hill	3240
10.10 ,,		
10.45 ,,	Ruins	3370
10.50 ,,	Al Kâf	3200
1.30 p.m.		
2.35 ,,	Rajm Muttâba	
2.40 ,,	Ral Mansîych	2990
2.45 ,,		
3.0 ,,	Camp at Theatre	

1st August.

7.15 a.m.	Left Theatre	
7.50 ,,	Point A	2590
8.5 ,,	K. Hadâdeh	2790
8 15 ,,		
8.40 ,,	K. Urjân	3060
9.5 ,,		
9.20 ,,	Jaranîn	2990
9.40 ,,		
9.45 ,,	Rawâk	
10.10 ,,	Birkeh	3260
10.30 ,,		
11.20 ,,	Ash Shamasâni	3270
1.15 p.m.		
1.20 ,,	Rajm Shibha	3220
2.15 ,,	Abdûn	3010
2.40 ,,		
3.0 ,,	R. abu M'awaideh	2990
4.15 ,,	Camp	

2nd August.

6.50 a.m.	Left Theatre	
8.50 a.m.	Maîseh	3020
9.15 ,,		
9.25 ,,	An Nawablissiych	2960
9.30 ,,		
9.55 ,,	Khirbet Sâr	3040
	Al Kursey	3100
	'Ain Seir	2230

3rd August.

7.30 a.m.	Left 'Ain	
8.20 ,,	Shajaret Dharâa	2780
8.30 ,,		
9.10 ,,	Point	2730
9.40 ,,	Near Kal Fahs	2330
9.56 ,,	Near Dajâjeh	2470
11.20 ,,		
	Birket al Amûd	3090
	Dabûk	3200
	On hill near 'Ain Hemar	3400

5th August.

7.35 a.m.	Left 'Ain Hemar	3000
8.20 ,,	Ar Râha	3170
8.35 ,,		
9.0 ,,	Safût	2700
9.10 ,,		
	Safût Wady	2400
9.50 ,,	Al Bashâ	2200
10.5 ,,		
10.50 ,,	Al Mûmîn	2000
11.25 ,,		
12.5 p.m.	Thogret um Ghafreh	
1.0 ,,		
1.50 ,,	Wady Rûmân	1630
2.20 ,,	'Ain Rubîa	1730
2.35 ,,	Near Mustâba	1930
2.50 ,,		
4.20 ,,	Ford, Wady ay Zarka	770

6th August.

7.15 a.m.	Left Wady az Zarka	
7.27 ,,	Ruin, point A	1070
7.32 ,,		
7.45 ,,	Al Ghazâl	1000
8.15 ,,	Hill of Ghazâl	1680
8.30 ,,		
9.30 ,,	Jarash, bath house	1900
	Mezâr	2430

9th August.

12.40 p.m.	Gateway, Jerash	1870
1.3 ,,	Point on ridge	2040
1.12 ,,		
1.30 ,,	K. Najîb	2265
1.40 ,,		
2.20 ,,	W. Nakleh	1950

		Feet.
3.0 p.m.	Dabîn	2450
3.20 ,, } 3.35 ,, }	Jebl Hakât (?) ...	3560
4.45 ,,	'Ain Jazâzeh	2460

10th August.

8.15 a.m.	Left 'Ain Kajâzeh (10 minutes) ...	2150
9.0 ,,	Point B (10 min.)	2150
9.55 ,,	'Ain	1250
10.0 ,, } 10.30 ,, }	Point C	975
10.55 ,, } 12.50 p.m. }	Bed of Wady Az Zerka	80
1.10 ,, } 1.40 ,, }	First Terrace	1190
2.25 ,,	Jalûd	1660
3.8 ,,	'Alan	1900
3.50 ,,	Third Terrace, J. Dzi	2850
	Hill near Hûsha...	3410
4.50 ,,	Fourth Plateau(top of range)	3500
5.5 ,,	Camp Neby Hûsha	3270

12th August.

8.43 a.m.	Left Neby Hûsha	
9.25 ,,	Point A	3440
11.0 ,,	Point C	3000
11.45 ,,	'Ain	2000
12.10 p.m.	Camp near 'Ain Jadûr	2380
	Castle of as Salt ...	2900

13th August.

8.0 a.m.	Left as Salt.....	

		Feet.
8.30 a.m.	'Ain Jazîr	2050
10.20 ,, } 10.40 ,, }	'Ain Mahîs.....	2600
11.15 ,,	Ber as Sabîl	2500
11.30 ,,	Point C	2660
12.15 p.m. } 1.20 ,, }	Fuheïs.....	1940
2.50 ,,	Thoghret as Sujûr	1440

14th August.

6.30 a.m.		
7.30 ,,	'Ain Jaryah	400
10.0 ,,	Near Kafereïn.....	– 470
	Passed W. Kafereïn	– 580
	Ar Râm	– 670
11.15 ,,	Wady al Aâdham	– 760
11.45 ,,	'Ain Suweimeh...	– 1080

15th August.

	'Ain Hajla.....	– 1200
	Dead Sea (O.S.)...	– 1292
	Tel Hammeh	– 600
	Beisan	– 750
	Jisr Mejamieh ...	– 730
	Fahil (Pella)	– 250
	'Ain Salahat	– 150
	Wady Callirhoe ...	– 400
	'Ain of hot water, Wady Callirhoe..	– 300
	Tekoa.....	2400
	'Ain Jidy.....	– 640
	Masada	200
	Sheihk Mahmout..	1750
	Bir, near	1900
	Kurmel	2730
	Zîf	2830

The work undertaken was the survey of the country passed over, and the photographing of objects of interest.

Observations for latitude and time were taken from fourteen places; these as yet are only roughly calculated.

Rounds of angles with the theodolite were taken from twenty-three places, thirteen of which were combined with observations of a *polaris* for a true meridian.

Angles with prismatic compass were taken from 135 points.

With regard to the list of names: there are 350; of these 84 agree nearly with those in Robinson's list. In his list there are 135 names, but it includes nearly double the country that was passed over, and therefore we should have about 80 agreeing with his.

This is to a certain extent a guarantee that the other names are somewhat near what they should be. I state this because our means of obtaining them were at second hand, as follows:—When a name was

given I put it down from sound (by Eli Smith's alphabet), and made Edward (who knows Arabic) do the same, and at the same time I made the dragoman write it down in Arabic on the spot. Each evening these lists were compared and an Arabic list made out, and on our return Dr. Sandreczky very kindly undertook to revise it; the results of his labour have already been sent home.

Many of the words no doubt are somewhat in error, but I believe with this list it would be very easy to get a correct list of the whole country from the Bedouins on the other side, who now often come to Jerusalem,

It was not an easy job to keep the reconnaissance connected in a country where some of the most important points were inaccessible, and where now and then we had to be careful of showing our instruments, on account of the prejudices of the Bedouins.

I may observe that on the east side, as on the west, it is not the ruins, or the 'ains, or the hills which have names generally, but a whole district; thus in one tract there may be nothing particular to mark it, while in another you may have two or three conspicuous hills, an 'ain, and several ruins, all of one name, and this fact, until it is recognised, is very perplexing.

From the pointed arches lying so frequently on older work, it is apparent that domesticated races lived on this eastern side long after the fall of the Roman Empire, and that it is comparatively but a short time since the Bedouins have held sway there. The population at one time on the Belka appears to have been dense.

The country now is cultivated by the black Bedouins and runaway fellahîn from the western side, working under the Adwân.

LETTERS FROM MR. E. H. PALMER.

JERUSALEM, *March 7th*, 1870.

III.

Having found it expedient to divide our journey, and being unable to obtain camels for the second part without going up to Hebron, we have run up to Jerusalem for a few days to refit before starting again southwards, and I take the opportunity of writing you a short account of our progress.

I am glad to say that our investigations thus far have been eminently successful, and that we have made some discoveries of great importance. The outline and features of the mountain range forming the edge of the Tîh plateau were examined by us from the south, and while still in Sinai. This will be duly explained in the maps and route sketches, which we have made, and which we hope to be able to forward as soon as our work is complete. From the Naôb el Mirad the pass in Jebel el 'Ejmeh, by which we entered the scene of our explorations, we crossed to

Nakhl, where we had made our depôt, and thence proceeded in a north-east direction as far as J. Ikhrimm.

The whole of the desert crossed by the Hajj route, and of which Nakhl is approximately the centre point, is an arid rolling plain, relieved by a few isolated groups of mountains and low plateaus, but otherwise presenting scarcely any features of interest to the explorer. The great Wady el Arish and its tributaries, which have been exceedingly incorrectly laid down on the maps, were first determined by us, and the orography more accurately defined; but as these are points that can only be elucidated by means of our map and route sketches, I refrain from dwelling upon them here.

At J. Ikhrimm we again turned off the regular route which we had been following for two days, and from this point up to our arrival at Beer-sheba every portion of our route was marked by objects and discoveries of the highest interest. Hearing that some ancient remains had been recently discovered by the Arabs at a place bearing the name of "El Contelleh" in Wady Garaiyeh, the large valley which receives the drainage of the mountain plateau south of J. Magrah or mountains of the "Negeb," we determined to investigate the facts. Arriving at the spot, we found an isolated hill, its summit covered with *débris:* here a chance hole was shown us in which we were told that a large water-jar had been found. We were unable to devote more than a day to the excavation of the place, but even in this time we cleared out sufficient of the *débris* to show that the summit had been occupied by a strong walled building, probably a fortress; but the most remarkable feature observable in it was that along the foundations of the walls there were square holes each containing four large amphoræ, carefully packed in with straw and other rubbish, and protected above by a framework of timber. Of one of these jars, which was thus marked upon the shoulder, Mr. Tyrwhitt Drake has made a careful coloured drawing.

Leaving Garaiyeh, we turned northwards to J. 'Araif, of which, in spite of the attempts made by the Arabs to prevent us, we made the ascent, being the first Europeans who have ever done so. The observations taken from the summit were of great use to us in determining the lie of the country, and in correcting previous maps. For instance, the high cliff noticed by Dr. Robinson, and called by him J. Mukhrah, is not an isolated mountain like Araif, but the precipitous edge of an extensive mountain plateau called Magráh, which, though intersected by various broad wadies, runs northwards, without any break, to a point within a few miles of Wady Sebá, where it is divided by Wady er Rakhmah, from the mountains of that name. To the west of this plateau, and forming the eastern border of the desert of et Tîh, are a number of lower mountain groups, amidst which the wadies which take their rise in the heart of J. Magráh meander on their way to the sea. This country is of course much more fertile than the open plain, and here it is that the interest of the region culminates, for here must have been the scene of a great part at least of Israel's wanderings, and here, if anywhere, we must look

for the traces of many of the cities and towns of "the south country" mentioned in the Scripture records.

We next examined Wadies Mayein and Lussan; in the latter, we discovered many cairns and stone circles, as well as traces of a later occupation. There is an ancient caravan road, probably Roman, from Gaza to Akabah, running up a portion of Wady Lussan.

Crossing successively Wady el Serúr and Wady Seisab, we came to 'Ain el Gadis,—in a wady of the same name,—the position of which, as representing the ancient Kadesh, it was of so much importance to identify. By Mr. Rowlands, who first made known its existence to Biblical geographers, it appears to be confounded with 'Ain el Gudeirát, which is, however, situated some miles farther to the north-east. We then turned off slightly to the west to examine Moweilch—the traditional site of Hagar's well—and found there many very interesting remains and traces of what appeared to have been an extensive and very ancient city, belonging to the same period as the stone circles and dwellings before noticed. On several of the higher hills were cairns, the form and arrangement of which afforded us considerable food for speculation. They are placed in rows, and invariably on the edge of the cliffs facing the east; they are too small to have been tombs or dwellings, and too far apart to have ever formed a wall. Near the same place were also two caves, one of which is approached by a staircase cut through the rock, and containing three small cells or compartments, and had evidently been used as a hermitage in Christian times, as the walls still bear traces of rude frescoes, amongst which crosses could be plainly distinguished. From Moweileh we proceeded to Gaseimeh, where we found water, also caves and many specimens of the ancient stone remains; thence we went on to Wady el 'Ain, so called from the 'Ain el Gudeerát, which exists some two days' journey up the valley.

Wady el 'Ain has been erroneously represented on the maps as a broad plain, which, running into Wady Murreh on the east, divides the Southern or Azazimeh mountains from the Northern mountains of the 'Negeb.

Without dwelling upon the slight geographical difficulty of making two valleys, undivided by a watershed, cut through a mountain plateau, I will merely repeat my former remark that the plateau of Jebel Magráh stretches without a break from immediately above J. Araif to Wady er Rakhmah. It is true that Wady el 'Ain, being a valley of much greater extent than any of those previously mentioned, makes a large gap in the outline of the range; and as it is at this point that we first find traces of cultivation and ancient habitation on any considerable scale, the natural limits of the "Negeb," or "Land of the South," may well be considered to begin northwards of this point. Crossing a low range of hills, we came to Wady es Seráin, where we once again struck the ordinary route, but almost immediately afterwards turned off by a side wady to the north-east into Wady el Birein,

in order to inspect the ruins said to exist there. Here began our first serious difficulty with the Arabs; the Azazimeh were encamped in large numbers in the valley, and word was sent to our sheikh that if we attempted to approach the place we should be driven back by force of arms. Accordingly Sheikh Suleiman implored us not to venture, as it would be at the risk of our lives; but, laughing at his fears, we walked straight for the place, leaving our Arabs to follow, and telling them that if there *must* be a blood-feud, they would be the sufferers. Firmness and a little "chaff," added to the tales which our Bedouins chose to invent of our prowess, soon overcame all scruples, and we remained two days on the spot, examining the ruins without molestation. Wady el Birein contains two ancient wells (whence the name) built with strong masonry, many ruins of houses, villa and other buildings, amongst which is a "fiskiyeh," or reservoir; an admirably constructed aqueduct leads down to it from the wells (this appears to have been wilfully destroyed).

Two hours to the north-west lie the ruins of El 'Aujeh, where we also stayed to sketch and photograph. They consist of a Byzantine church and a fort situated upon the summit of a hill, with the ruins of a small town at the foot, where we also found a smaller church, and three fine wells, now dry. Around the base of the hill sweeps a fine broad valley, banked up into flat terraces with wonderful skill, and divided by innumerable strong walls and fences. This valley is called by the Arabs Wady el Hanein: to the stranger it is Wady el Hafir, and the real name has never before been breathed into European ears. Perhaps the names Abdallah and Ali, which our Arabs had themselves given us, made them forget that we were not of the "faithful," and rendered them more confidential; but certain it is that the wady is called Hanein, as we have had many opportunities of testing, and that the Arabs have the strongest repugnance to naming it to a stranger. The reason for this is, that there exists an old tradition amongst them, that "should a seil (or flood) once come down Wady Hanein, there would be an end of all prosperity in the country." The origin of this legend is obvious: the wady is so well embanked, and laid out in terraces to distribute and utilise the waters, that a flood would be a physical impossibility. This the Arabs do not understand, but the tradition savours sufficiently of ill omen to prevent them from mentioning the name to people who are supposed to exert so powerful an influence over the rainfall as the Nasára.

El 'Aujeh has been identified by Dr. Robinson and others with el 'Abdeh, the ancient Eboda, and the question has not been hitherto satisfactorily settled. We have, however, discovered, without any doubt, that 'Abdeh is situated in the very heart of J. Magráh, at the head of Wady Murreh, and near the Nab el Gharib, and that there is a road from Tell 'Arad, and another from Gaza, both leading to Akabah, which pass by this place.

We have already made arrangements with the Arabs for visiting

'Abdeh on our return journey southwards into the mountains. Another much-disputed point is the position of Sebáta. Mr. Rowlands pronounces it to be identical with Rehaibeh, and Dr. Stewart heard that it was situated east of Khalasah, at the foot of the Magráh mountains; but no one appears ever to have visited it. It was not without considerable difficulty that we could prevail upon our Arabs to reveal the site, and when that information was at last extorted from them, it was no easy work to induce them to take us thither, as they were on bad terms with the Bedouins of the neighbourhood. At last we succeeded in discovering and visiting the real site, and this and other discoveries to which it led have amply repaid us for the trouble and risk.

From El Aujeh we crossed low hills and wadies in a north-east direction for eight miles, when we struck Wady el Abyadh, and about three miles farther came to the head of a small valley called Wady Sideriyeh. A mile to the north of this, and on the summit of a hill overlooking a large plain, is situated a fortress called El Meshrifeh The sides of the hill are furnished with escarpments, bastions, and strong towers connected with rock-hewn chambers, and on the summit are several buildings, amongst them a church. But the lower portion of the masonry of the towers is of a different date, and these, as well as an old walled-up cave, appear to belong to much more ancient times. Three and a half miles to the south-south-east, situated in a large plain called Migrá Esbaita, is the ruined town of Sebáta (pronounced Es'baita). Its size and state of preservation warrant the Arab saying, "Greater ruins than El Aujeh and El 'Abdeh there are none, save only Sebáta, which is grander than either." The city contains three churches and a tower, all in a much better state of preservation than any other ruins we had seen, the apse of the larger church still standing upwards of 30ft. in height; the houses in some cases are nearly perfect, and the streets still well defined. Over the door of the tower we found a rudely-sculptured stone, on which was this device—an urn, from whose mouth sprang a palm, or lotus, supported by a lion and a griffin.

The houses are constructed with great architectural skill, and the want of timber is supplied by the contrivance of building the basements with arches about 3ft. apart, large stone beams being laid across to form the floor of the next story. The number of garden walls, towers, and villas, which for miles surround the city, show how fertile and thickly populated the country must once have been. Here, as well as at El Aujeh, we noticed a peculiar feature in the landscape. The hills and more elevated portions of the wadies are covered with black flints, and such ground is called by the Arabs "Himadhat," and they were in every case swept into swathes or small round heaps, with a regularity that pointed to some agricultural operation, although we could not at first conceive what plant could be cultivated on such stony and unpromising soil; but the tradition of the Arabs, who call them "*telcilat el'Aneb*," *grape-mounds*, at once solved the difficulty; and the advantages

of these sunny slopes, and of the radiation of heat from the black stones for the cultivation of the vine, was at once apparent. I mention this, as it has suggested to us the possible solution of another important topographical question, which, however, I will reserve until we have books of reference at hand.

The name Sebáta at once suggests the Zephath of the Bible. Zephath signifies a watch-tower; and it is a noteworthy fact that the fortress of el Meshrifeh, discovered by us in the same neighbourhood, exactly corresponds to this in its position and in the meaning of the name. I would make one more suggestion respecting this site. Zephath has always been considered as identical with Hormah; and in Judges i. 17 it is thus spoken of: "And Judah went with Simeon his brother, and they slew the Canaanites that inhabited Zephath, and utterly destroyed it. And the name of the city was called Hormah." May we not understand the word "Zephath" in its proper signification, and consider "the city," after all, as separate from the tower or fortress thus attacked and destroyed. The city, which was protected by so commanding a fort, might well be spoken of as the City of the Tower; and, as so important a position would not be likely to be neglected by later inhabitants of the land, I think it not improbable that in El Meshrifeh we see the site of Zephath itself, and in Sebáta that of the city of the "Zephath," to which the Israelites, after their victory, gave the name of Hormah. About fifteen miles to the north-west we came upon other remains hitherto unknown: a rock-hewn sepulchral cave containing six lateral recesses; and, a little farther on, a ruined town of considerable extent, called Sa'di. Near by are traces of a rock-hewn well, which, from the fallen troughs beside it, cut in huge blocks of stone, belong evidently to a very ancient date, and would seem to possess a much better claim to be identified with Isaac's Well at Rehoboth, than that at Rehaibeh, two miles farther on. The ruins at the latter place, and those at Khalasah, where we next encamped, are better known; and, although we were enabled to make a more leisurely inspection of them than has yet been attempted, I shall reserve the description for a more extended report. Khalasah is situated in Wady Asluj, which at this point takes the name of the ruined city. Wady el Kurn, in which it is generally placed, has no existence except upon the maps. From Khalasah we went on to Beer-sheba, and found on our way the ruins of a Roman station, and a road from Gaza, joining, as we were informed, the old road to Akabah *viâ* 'Abdeh, or Eboda. We found Beer-sheba presenting an aspect far different to that described by previous travellers; for such had been the severity of the recent drought, that the herbage is entirely burnt up, and in place of rich pasturages there is nothing but a dry, parched valley, bare and desolate as the desert itself. This state of things had compelled the Bedouins to move off with their flocks and herds to more fertile spots, and we were therefore unable to find camels to take us back into the mountains without going up to Hebron, as our Arabs dare not venture so far beyond their own borders. We did not

regret this, however, as we were enabled to visit the ruins of Haura described by Dr. Tristram, and moreover succeeded, even so near the beaten track, in lighting upon another ruined town named Datraiyeh, of which the existence has not, I believe, previously been made known.

In a short sketch like the present report, I cannot give the details of our work; but I may confidently say that when they are published, we shall be found to have corrected many erroneous impressions with regard to the country, and to have discovered much that is of high importance in illustrating the geography and history of the Bible; and I trust that in the remaining portion of our explorations we may be as successful. Our journey has been a most interesting one, though not without its anxieties and risks. Our Arabs were very different to the "gentle Towara," and it was no easy task to overcome their prejudices and their fears, and to extract from them the information which we required.

The whole of our journey—nearly 600 miles—from Suez to this place has been performed on foot, and having no servants, everything has devolved upon ourselves. This, with the route-sketching, making plans, &c., left us but little time to ourselves; and although Mr. Tyrwhitt Drake, in addition to his own natural history investigations, devoted himself with great energy to assisting in the other objects of the expedition, yet we seldom worked less than fourteen to sixteen hours in the day. We have brought plans and sketches of all the ruins and other objects of interest on our route, and Mr. Tyrwhitt Drake has also taken a number of photographs. Curiously enough, we did not find a single inscription in the country, if we except the Arab tribe marks, which have, many of them, considerable archæological and historical interest. I commenced a collection of them last winter in Sinai, and hope to give a complete account of them, with their history and origin.

When we arrived here at Jerusalem, the long-continued drought had caused the greatest apprehensions, as the water supply was nearly exhausted; the rain has, however, at last come, and has set in with great violence. As soon as the weather permits, we shall resume our journey. Starting from Hebron we shall enter the "Negeb" mountains by Tell Arad, and instead of following the regular route to Wady Musa, shall pursue what we believe to have been the course of the Roman road to Abdeh. From this point we shall descend into Wady Murreh, and examine this and Wady Figreh, as well as the passes of Ghárib, Enfah, &c., exploring as far as possible the lower portion of the mountains inhabited by the Azazimeh. This will complete the exploration of the Tîh and its mountain borders, the work which the Palestine Exploration Fund has confided to my hands. After visiting Wady Musa we shall return into Palestine north-east of the Dead Sea, and so back to Jerusalem. In our remaining trip we shall travel even more simply than before, discarding the larger tent, and only taking

with us the absolute necessaries of life. We find that a very light equipage enables us to move with more freedom, to say nothing of its advantages in an economical point of view.

E. H. Palmer.

IV.

Jerusalem, *June* 2, 1870.

Leaving Jerusalem on the 20th of March, we proceeded to Hebron, with the intention of completing our explorations in the mountains of the Tîh. From the latter place we took with us a small party of the Jehalin Arabs, with four camels to carry our baggage, and an Abyssinian lad whom we had hired as servant, and the well-known old sheikh Hamzeh of Khalil; we ourselves, as usual, performing the journey on foot.

Passing by Tell 'Arad, Keseifeh—a ruin of considerable extent, and containing the remains of a Christian church—Melh, 'Ar'arah, and various other places of minor importance, we came to Ras Abu Taráfeh, erroneously called on the maps Abu Teraibeh, from which point our route lay through entirely fresh and unexplored country. Here we noticed traces of a large caravan road, and the ruins of a small station or fort, the first indications of the Roman road to Arabia, through the mountains of the Azazimeh, the existence of which has been before suspected, and which we have since proved by our subsequent discoveries. We then traversed that portion of the mountain plateau known as Jebel Rakhmah, and on the fifth day came in sight of Wady Murreh. The maps are so incorrect that it would be impossible to convey an idea of this piece of our journey without tracings of our route sketches, but we were pleased to find that the latter exactly fitted in with those which we had previously made while examining the mountains from the western side.

The descent into Wady Murreh is made by a steep pass, called Nagb el Gharib; the valley is not by any means, as has been described, a broad plain, but is a deep cutting in the great limestone plateau, and from its sheer precipitous sides, and the huge mounds and banks of alluvial deposit with which its bed is dotted over, presents a picturesque and even grand *coup d'œil*. To the south-west the plateau assumes a more broken and mountainous character, forming the head of Wady el Abyadh, and to the east of this are situated the ruins of 'Abdeh, the ancient Eboda, which we had determined to visit. We pitched our tent in a small branch of Wady Murreh, called Emka'ab, and made preparations for an excursion, which was to settle the disputed site, on the following morning. By this time the Azazimeh, who were encamped in large numbers in the neighbourhood, began to collect, and showed considerable displeasure at our intrusion on their domains, hinting, in unmistakable terms, that we should not be allowed to see any more of the country. In the morning, however, we started, fully prepared for a scene, and taking with us two

of our Jehalin camel-drivers, whom we found, in spite of their bad reputation, to be very willing and intelligent fellows, made for the pass at the head of Wady Emka'ab, by which 'Abdeh was to be approached. As we neared the foot of this pass we observed a party of armed men hastening on to anticipate our arrival, and who, as soon as they saw us, called out to us in peremptory tones to go back from whence we came while our lives were yet safe. Getting nothing but a laughing retort, and seeing us determined to advance, they became very angry and excited, and rushed up the pass singing their war-song, and occasionally firing off their matchlocks. Arrived at the top, their attitude and language became so menacing, and the large stones they threw over the edge came so unpleasantly near, that we thought it advisable to sit down and endeavour to hold a parley and come to terms. We accordingly sent up one of our men to treat with them, but the experiment was unsuccessful, and our messenger of peace was met with drawn swords and pointed guns, and fairly driven down the hillside. We were, therefore, obliged to discuss the matter from a distance, and after several failures and several grand demonstrations on the part of the Azazimeh, in one of which they actually lit the beacon fire, proclaimed war, and offered us the customary start before making the attack, we at last arranged the matter amicably for a pecuniary consideration, our late antagonists consenting themselves to act as our guides for the sum of not quite eight shillings, to be divided amongst them all. Here and at other places where no Europeans had before ventured, we overcame very serious difficulties at a trifling cost; but elsewhere, where the ill-advised liberality of M. de Saulcy and the Duc de Luynes and others has raised the expectations and excited the cupidity of the Bedawin, we were often compelled to pay extravagant sums before we could prevail upon them to show us a single thing. The invariable answer to our remonstrances in such cases would be, "The Amir thought it worth so much, and if you don't like the price you need not go."

I mention this because that part of our journey which lay through districts previously visited was beyond all proportion more expensive than that through unknown parts of the country; and while professing ourselves able to deal on fair terms with the Bedawin, we are powerless in the face of such precedents as "the Amir's" lavish backshish. Had we given in at first to the Azazimeh they would have demanded pounds instead of piasters, and we might, by paying these demands, not only have saved ourselves some unpleasantness, but have effectually closed 'Abdeh against all but millionaires. As it was, neither our purses nor our inclinations sanctioned such a course, and we preferred trusting to firmness and patience for success.

'Abdeh is situated on a kind of promontory, and is defended on the east side, where it joins the plateau, by a strong wall, and on the precipitous parts by escarpments similar to those described at Meshrifeh. It consists of a large fort, with official residence attached, and a village of considerable size extending on either side. The buildings, which are

Christian, are some of them in good preservation, but the remains are neither so extensive nor so perfect as those of S'baita. Careful measurements were taken, and plans made of the whole. The discovery of the real site of Eboda is important in a geographical point of view, as Dr. Robinson and others have identified it with El Aujeh, ruins which I have described before; and the existence of an ancient road from Gaza to Petra and Akabah, passing through the Azazimeh mountains, has consequently remained a matter of great doubt.

Leaving 'Abdeh, we proceeded down Wady Murreh, which, after about seven miles, is joined by some other wadies, from one of which it then takes the name of Wady Madherah. Four miles farther down, the ancient road, which we had hitherto been following, branches off into the mountains of the Azazimeh by a valley called Umm Tarfa. We were surprised to hear from the Arabs that Jebel Madherah lay only a little farther down the wady of that name, so sending on our camels, with orders to camp in the Wady Umm Tarfa, we proceeded to ascertain if the information was correct. After two miles we reached the foot of the mountain, or rather large isolated mound, which we sketched in with the neighbouring passes of Yemen and Sufáh, over which lie the roads from Hebron to Petra. We found the position of this mountain to be wrongly marked on the maps by more than twelve miles.

Turning into Wady Umm Tarfa we commenced the actual exploration of the Azazimeh mountains. For some miles we followed the course of a precipitous but narrow valley, called Wady Hanjúreh, and then struck over a monotonous, though rugged, plateau of limestone; descending by a steep pass, called Nagb Ibn Már, we found ourselves on a broad open space, which might almost be called a plain, and from which several large valleys, the principal ones being called Wady Rámán and Wady Abu Taraimeh, flow down into the 'Arabah. The elevation of this mountain near the Nagb Ibn Már is about 2,000 feet, the same as that of Jebel 'Araif, which, however, is considerably higher than Migráh. This shows how gradually the plateau lowers until it falls away, in a series of precipitous steps, into the 'Arabah on the east, and towards Jebel 'Araif to the south, terminating the plateau of the Azazimeh mountains, and again rising until it forms a second step at Jebel 'Ejmeh, the southern limit of the Tîh. On the third day we emerged from the mountains by Wadies Rámán and Jerâfeh, near the head of the former of which we found a ruined fort or station, a conclusive proof, if the numerous broad but disused camel tracks which we continually met with had not been sufficient, that we had been following the ancient Roman road throughout the whole of our course. In Wady Ghamr, to which we next came, we caught our first glimpse of the Arabeh. Here, again, we found the maps considerably at fault: Wady Ghamr is described as a smaller wady, taking its rise in the Azazimeh mountains, and flowing into the Arabeh from the west; and Wady Jerâfeh is set down as a larger watercourse, flowing down from Jebel 'Ejmeh and meeting the waters of the Ghamr at the south-east corner of the Migrah mountains. The real fact, however,

is that Wady Ghamr takes its rise to the south-east of Jebel Araif, flows round the base of the lower plateau, into which we had descended from the Nagb Ibn Már, and receives the waters of Jerafeh from the north. The whole appearance of this mountain region is desolate in the extreme, and although we found water in many parts of our route, the Azazimeh who inhabit it are some of the poorest and most degraded of the Arab tribes. We did not complete the exploration of their country without experiencing considerable opposition and annoyance, but owing to the light baggage with which we travelled, and the unpretending appearance of our *cortége*, we were enabled to overcome the difficulties, and to escape without any serious mishaps. From Wady Ghamr we crossed the Arabeh and entered the mountains of Edom. The Arabs to the east of the Arabeh were then actually fighting, and at least one party of travellers whom we afterwards met had been unsuccessful in reaching Petra. To the no small astonishment, however, of the fellahin, we appeared amongst them without warning, and remained for more than a week examining the antiquities of the place. On our entry we were encountered by a band of thirty armed ruffians and a great display of warlike demonstration, and alarm guns were fired from all parts of the valley to collect the fellahin against the invaders. It required all our diplomacy to manage these scoundrels, who are now, if possible, more lawless and turbulent than ever, but we luckily escaped with no further loss than that of a crowbar. We were fortunate enough to discover a small but exceedingly interesting rock-cut city some distance to the north of Petra, the existence of which had been previously unknown. Of this we shall give a description in another place. At Petra a question of some difficulty presented itself with regard to the expedition to Moab, which it had been arranged that I should undertake. The obvious and cheapest route was to return to Jerusalem and enter the country by the territory and under the escort of the 'Adwán. To take the eastern course involved passing through a country already embroiled in warfare, and amongst tribes whose lawlessness and rapacity are proverbial even amongst the Bedawin themselves. Several considerations, however, determined us to take the latter course. The 'Adwán and S'Khúr Arabs had been employed in the affair of the Dhibán stone, and being "posted up" in desert news, we knew that they had not only searched in vain in their own country, but had been unsuccessful in their attempts to discover several "written stones" said to be in the possession of the Hamaideh and Beni Hamideh, the tribes whose opposition caused the lamentable destruction of the celebrated monument of Meshá. We accordingly resolved to brave the risks and enter into negotiations with the last-mentioned tribes, unprejudiced by the presence of strangers, whom we knew that they regarded with no small suspicion and distrust. We accordingly made arrangements with the 'Ammaún Arabs, and, under their guidance, left Petra. Although this tribe possesses a better reputation than the other Eastern Arabs, we soon found that there was little to choose between them and their neighbours, and from them we met, for the first time in our expe-

rience of Bedawin, with breach of faith and dishonesty. Although several times threatened, we fortunately escaped without personal violence, and have great hopes of bringing the offenders to justice, as, thanks to the kindness of Mr. Moore, the consul, the affair has been taken up officially here. Throughout the whole of our journey to Moab we were obliged to adopt the most stringent precautions, as predatory bands infested the country in all directions, and we had more than one instance of the state of things in two wholesale murders, which occurred within a short time of our passing the spots in which they were perpetrated. On one occasion an Arab of the Saidiyeh tribe sought the refuge of our camp; he had been robbed of his arms, stripped to the shirt, and received a bullet-wound in his foot, while his three companions had been shot dead within a short distance of our camp. Poor fellow; he was only a robber, according to his own statement to us. Even our own guides, as we were making a forced march one night, appropriated a camel, whose owner being alone had fled at our approach, and we had some difficulty in compelling them to abandon the spoil.

We traversed the eastern sides of the Arabeh, descended into the Ghor, and proceeded past N'meirah to the Ghor el Mezári, where we took guides from the Ghawárineh, and devoted a day to the examination of the Lisan, on which we found one small ruin. We entered Moab by the pass of Jerrah, and were hospitably entertained by Ahmed Ibn Tarif, the sheikh of the Beni Hamideh. The object of our coming was immediately divined by the Arabs, for we found that the affair of Dhibán had afflicted them with a positive mania for "written stones." Our host offered to conduct us at once to Shihán that we might see, and, if it pleased us, buy a stone which he declared he had found and concealed there, and which the now celebrated Ibn Nuseir had been unable to obtain for the "consuls at Jerusalem." He had, however, a keen eye to profit in the transaction, and declared that we must pay a sum of money down before seeing the stone, because, as he frankly told us, it might be worth nothing, and then we might only give him a trifle for his trouble, which would not answer his purpose. He, moreover, added the following reassuring remark: "If you Franks had come down here twelve months ago and offered me a pound or two, you might have taken all the stones you chose, the Dhibán one included; but now you have taught us the worth of written stones, and the Arabs are awake to their importance at last." In fine, we considered the necessity for ascertaining the truth, and had in the end to give a liberal backshish for permission to see the stone, which turned out after all to be a carved Ionic capital. This was but one of a series of troublesome and expensive disappointments. Several times we were told, by men who had actually assisted in breaking the Dhibán stone, and who might therefore be supposed to know what it was like, of other monuments which they declared to be the very counterpart of it. We could not leave such statements unsifted, and the same routine had to be observed time after time—an extravagant backshish—a long walk or ride, occasionally entailing a night passed under

the shelter of a rock, with no other food than a piece of dry bread and a skin of water—the result being a stone covered with old tribe marks, natural veins, or at the best a fragmentary Nabathæan inscription.

We visited camp after camp, staying with the various sheikhs, passing from tribe to tribe, and living *à la Arabe* in order to gain their confidence, and in this way we succeeded in inspecting every known "written stone" in the country, besides examining and searching ruins for ourselves; but the conclusion has at last forced itself upon us that, *above ground* at least, there does not exist another Moabitish stone.

If a few intelligent and competent men, such as those employed in the Jerusalem excavations, could be taken out to Moab, and certain of the ruins excavated, I think it not improbable that further interesting discoveries might be made, as the Bedawin have at various times undoubtedly found relics of antiquity—gold coins, and even a small idol—when ploughing in the neighbourhood of the ancient cities. Such researches might be made without difficulty if the Arabs were well managed and the expedition possessed large resources, but it must be remembered that the country is only nominally subject to the Turkish Government, and is filled with lawless tribes, jealous of each other and of the intrusion of strangers, and last, not least, all greedily claiming a property in every stone, written or unwritten, which they think might interest a Frank.

At least a thousand pounds would be required, and with this sum a second Moabitish monument might be found, but until such sum is put into an explorer's hand there is little chance of a second being brought to light.

Our journey has not, however, been unfruitful, as we have visited many parts of the country previously unexplored, and have carefully examined ruins before known only by name, and have thus collected much valuable geographical information. Amongst other curiosities, we were told of the existence, on the shore of the Dead Sea, of a wonderful figure of "the wife of the prophet Lot," of which they told a legend differing but slightly from the Biblical account. The spot was very difficult of access, and could only be approached by men on foot and without incumbrances, so we started early one morning from the camp of Ibn Tariff and reached the "Bint Nebi 'Lut" a little before sunset, and passing the night as best we might under shelter of a cliff, returned the next day. This figure is situated between the "seils" of Jerrah and Mojib, and is a natural pinnacle of rock, which, however, does present a rude resemblance, when seen from a distance, of an Arab woman with a child on her shoulder. The legend is sufficiently curious as showing how local tradition preserves the memory of bygone events in spite of time or change of race. Returned to Jerusalem, we have been working diligently at the inscriptions in the Haram area and elsewhere, and have got copies, or squeezes, of them all. The great Cufic inscription round the arcade has been copied with great care. The point where the substitution of the name Abd Allah for Abd el Melek was shown by M. de Vogüé puzzled us a little at first, as the distinct join shown in that

gentleman's illustration is the commencement of a fresh set of mosaics, the former batch having run out, which is carried through the rest of the inscription. But on inspecting it closely by the aid of ladders, we found that immediately after that join, the mosaics had been taken out, and clumsily replaced to insert the forged name. I have taken a squeeze impression, which shows the state of the mosaic both in its original and altered aspect; and having traced the outline of the letters while they were visible through the wet paper, have obtained a copy of this part of the inscription, from which persons interested in the question may judge for themselves.

We have had no leisure to make tracings of our plans, inscriptions, &c., as we have worked without interruption since leaving Egypt. I, therefore, reserve these, as well as a more detailed report of our proceedings, until our return to England. As soon as we can finish our work here, which I trust will only occupy us a few days longer, we intend visiting Beit Jibrin, starting immediately afterwards, through Palestine to Damascus, and shall endeavour to glean all the information possible about the nomenclature, traditions, and archæology on our route.

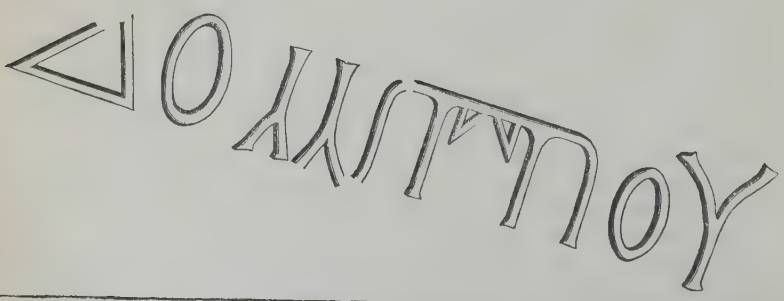
E. H. PALMER.

INSCRIPTIONS AND MASONS' MARKS.

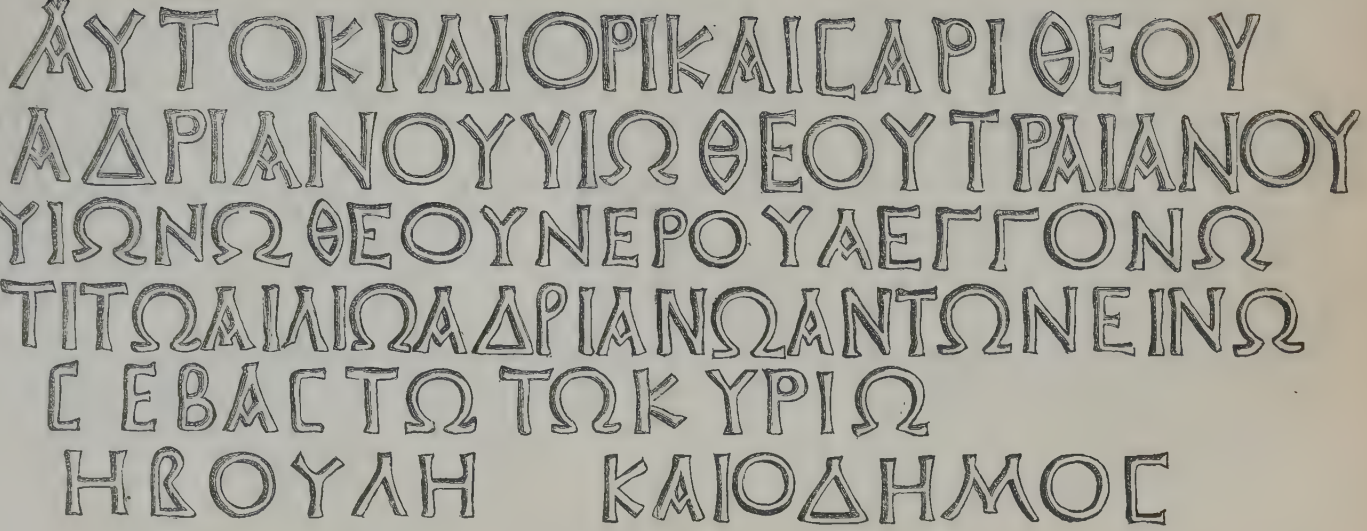
THESE inscriptions and masons' marks, from the Lebanon and Saida, are for the most part reduced from squeezes, and have not been described or published previously.

They are naturally very imperfect; but it is hoped that future travellers will, with these to help them, recover those portions which are here missing or incorrect.

C. W.

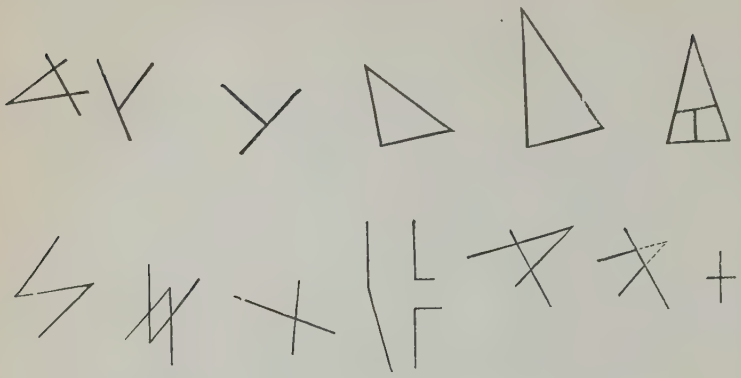


Mason's mark or name on the bottom of a Corinthian capital at Saida. The middle letters are indistinct.



INSCRIPTION ON A PEDESTAL IN THE GARDEN ON MONS. ARBELA, SAIDA.

MASONS' MARKS FROM SIDON.

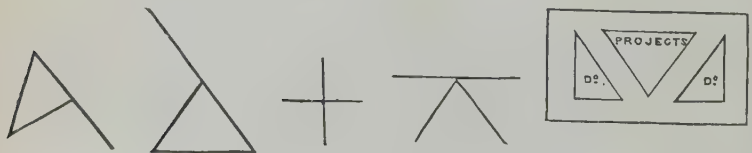


Reduced from squeezes of characters on Wall D of Sea Castle, Saida.

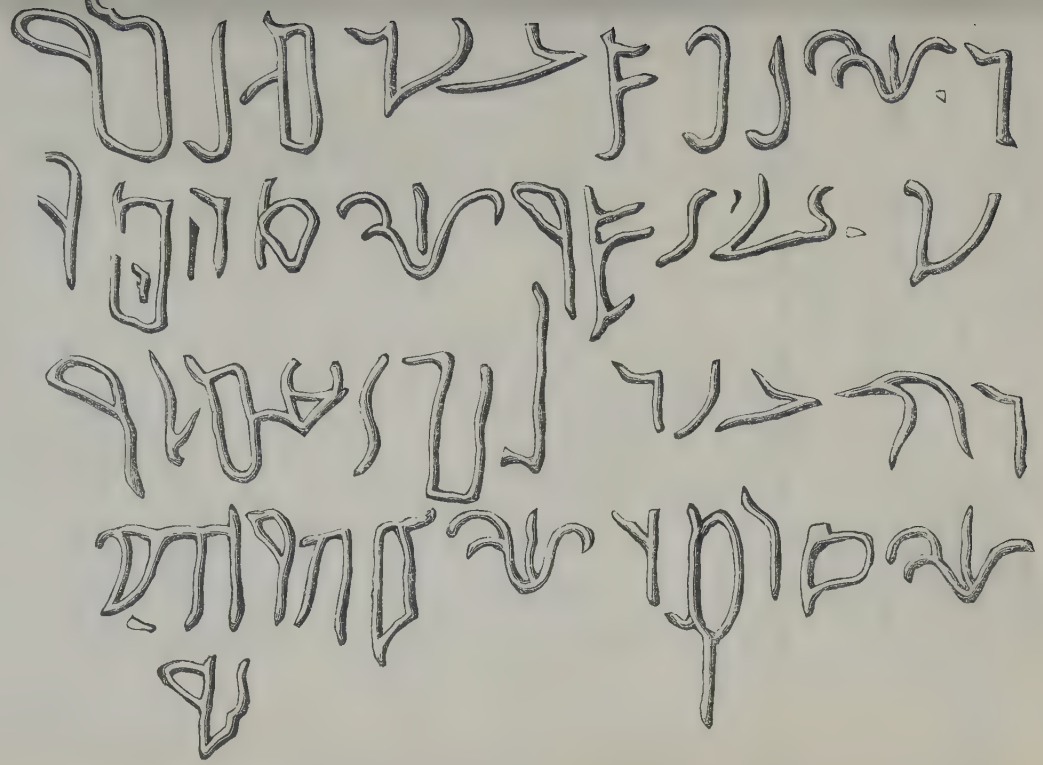
Reduced from squeezes of characters on Wall C of Sea Castle, Saida.

REDUCED FROM SQUEEZES.

Castle. Cross inside arch. Citadel. Hiram's Tomb.



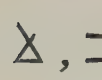
Sketches of incised marks on walls on Sea Castle.



COPY FROM A SQUEEZE OF A NABATHEAN STONE FROM UM ER-RUSSAS, ON KERKA MAAIN (SCALE ½)

CHARLES WARREN.

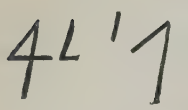
MASONS' MARKS IN THE LEBANON AND CŒLE-SYRIA.



Burkush.

Afka.

Kulats-Ah-Shukif.



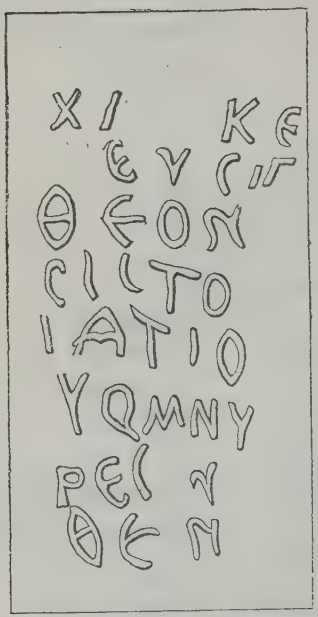
Baalbec.

Christian.

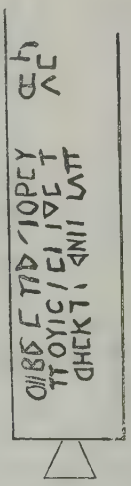
Damascus—Christian.(?)

Damascus.

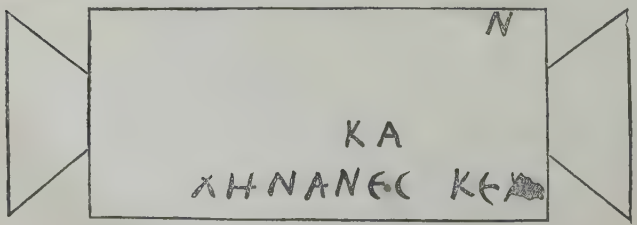
Banias, at South Gate on column (roughly sketched).



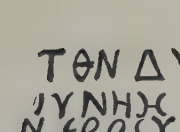
Stone on summit of Hermon. Scale 1-12.



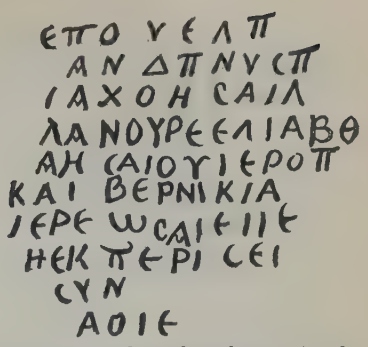
Ailia on west wall of temple, outside. Scale 1-12.



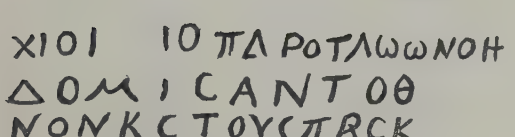
On west wall inside of eastern temple above north bank of Awaj.



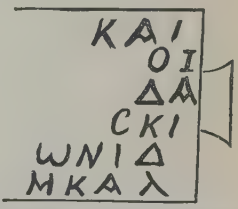
Rukleh.—No. 1.—On a column in upper temple; remainder of inscription buried in the ground. Scale 1-12.



Rukleh.—No. 2.—On a column in upper temple; remainder of inscription buried in the ground. Scale 1-12.



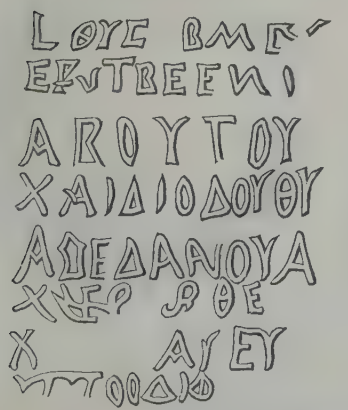
Rukleh.—No. 3.—On a stone lying in lower temple. Scale 1-12.



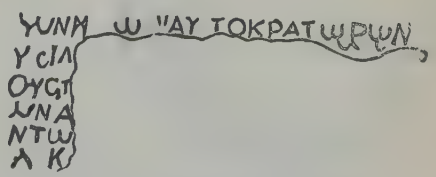
Rukleh.—No. 4.—On a stone built in wall in house. Sc.1-12

Cut on rock at]Ain Hersheh. Scale 1-12.

Inscription at Kubrika.



On pedestal, Deir Al Ashayir. Scale 1-12.



On Temple Hibbariyeh. Scale 1-12.

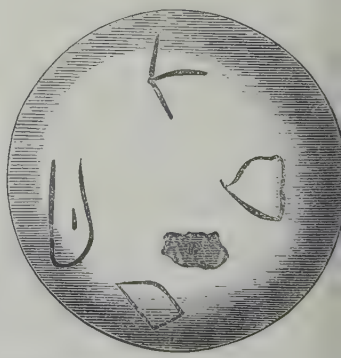
LIST OF WEIGHTS AND OTHER STONES FOUND IN THE SHAFTS AT OPHEL, ROBINSON'S ARCH, AND ELSEWHERE.*

		Estimated Weight. Grains Troy.
A	Broken	14647
B	,, ...	7765
D	Nearly perfect	7253
B	,, ...	6987
B	Broken	6562
—	———	5906
B	Broken	5929
C	Nearly perfect	5674
A	M. Ganneau, nearly perfect... ...	5698
E	Broken	3062
—	———	4203
B	———	3097
A	Nearly perfect	2891
A	,, ...	3049
A	,, (given previously, 2301) ...	2321
B	Broken	1750
B	,, ...	1859

These weights are only obtained approximately.

The A of M. Ganneau was found at Convent of Sisters of Sion, and was lent for comparison ; it has an inscription on it, already forwarded home.

November 2, 1869. C. WARREN.



Stone Weight, full-size. (See squeezes of same.) Characters, supposed to be Hebrew, on a stone weight found at Robinson's Arch—exact weight 1234½ grs. troy. By Capt. Warren, R.E.

* These weights are now all in the office of the Fund

NOTE ON THE POOL OF BETHESDA.

It has always struck me that in the Indian baolee (*pr.* bowlee) we have the analogue of the Pool of Bethesda ; it is a pool of masonry entered at one end by a flight of steps, and from which at the other water may be drawn by a pulley and rope. On three sides of the pool, and just above the water level, with steps leading down to it, are a series of chambers opening into one another, resorted to for shade and coolness, and called taekhánas.

The main difficulty with Bethesda, after settling its locality, ἐπὶ τῇ προβατικῇ, is to account for the five stoas. May they not have been subterranean, and, in fact, a range of pillared taekhánas as represented in my ideal plan ?

N.B. The well at the city of Nahor must have been a baolee, for—first, Rebecca went *down to the well* and filled her pitcher ; and, second, she drew water (at the other end) for all the camels.

February 5, 1870. R. F. H.

ANNUAL GENERAL MEETING.

His Grace the Archbishop of York in the Chair.

The Annual General Meeting of the Palestine Exploration Fund was held at the Royal Institution, Albemarle Street, on the 16th of May, 1870.

The Chairman : Before I commence the business of the meeting, I have to mention that letters expressing regret at inability to attend, and interest in the work of the Palestine Exploration Fund, have been received from the Lord Bishop of Winchester, the Lord Bishop of Peterborough, the Dean of Chester, the Dean of Canterbury, Sir Moses Montefiore, and the Master of the Temple. I will now call upon the Rev. Mr. Holland, the Secretary, to read the Secretaries' Report.

The Rev. F. W. Holland read the Report.

REPORT OF THE COMMITTEE.

The Report, which the Executive Committee of the Palestine Exploration Fund have the honour to lay before you this day, will be very brief.

Captain Warren will himself describe to you the result of his excavations at Jerusalem, which have of late formed the *main* portion of the work that the Society has been carrying on ; and full details of its other operations have already appeared in the public papers, and in the "Quarterly Statements" of progress, which are issued to all subscribers.

In addition to the excavations at Jerusalem, which have not been unfruitful in results, some interesting explorations have been made during the past year in the north of Palestine. Captain Warren found it necessary to withdraw his men from Jerusalem during the summer months, in consequence of the prevalence of fever, from which they had already suffered much, and the whole of the exploring party removed to the Lebanon, until the cooler weather set in. While there they occupied themselves in investigating the ruined temples of Cœle-Syria and Mount Hermon.

The temples of Cœle-Syria appear to date from Roman times, and the inscriptions which are found in them are mostly Greek.

The small temples about Hermon appear to be somewhat of more ancient date, their architecture being of the Ionic order.

On the summit of Mount Hermon stands the ruins of a sacellum, which has nothing in its construction in common with the temples on the west below. This probably had to do with a different and more ancient form of worship.

All these temples have been sketched, and accurately described.

On his journey northwards Captain Warren visited Saida, the ancient Sidon, and discovered there, on the stones of the ancient walls, undoubted Phœnician masons' marks, somewhat similar in character to those in his excavations at Jerusalem. He also procured from excavations which had been made at Sidon some specimens of ancient pottery precisely similar to that found at Jerusalem, in the excavations there, below the early Christian pottery.

Another portion of Captain Warren's work deserves also to be especially mentioned, viz., his labours in connection with the discovery of the Moabite stone.

That stone was actually discovered by the Rev. Mr. Klein, a Prussian gentleman connected with the Church Missionary Society in Jerusalem, in August, 1868, and the Prussian Government, to whom the discovery was reported, proceeded to take steps to obtain possession of the stone.

As long as others were in the field, and the safety of the inscription would have been endangered by his interference in the matter, Captain Warren very properly abstained from any action.

But when, owing to an unfortunate quarrel between two parties of Arabs, it had been broken in pieces by cold water having been thrown upon it after it had been heated by fire, he very promptly came to the rescue, and it was owing to his exertions that the excellent squeezes of the remaining portions were obtained, which have been the means of the interpretation of the inscription, and which you now see lying on the table before you.

Another important work which has been undertaken during the past year by the Palestine Exploration Fund, has been the exploration of the Tîh desert, the wilderness of the forty years' wanderings of the children of Israel.

The services of Mr. E. H. Palmer, who was previously connected with

the Ordnance Survey of the Peninsula of Sinai, were secured for this purpose; and in company with Mr. Tyrwhitt Drake, he is now engaged in exploring that vast tract, a large portion of which has never before been visited by travellers.

Mr. Palmer's first work was to examine the passes of the range of mountains which forms the northern boundary of the Peninsula of Sinai, and which must have been crossed by the children of Israel on their march northwards from Mount Sinai. He then visited the mountainous district of the Negeb, or "south country" of the Bible, and investigated the ancient ruins and wells that abound in that country, which, though now a desert, bears traces of having once sustained a considerable population. Correspondence with that remote region is difficult, and the reports which have reached us from Mr. Palmer are too scanty for us to give any accurate description of the work which he has accomplished; but he appears to have made some interesting discoveries with regard to the fixing of the site of Kadesh, and the maps which he has sent home prove that he is accomplishing with great accuracy the work which he has undertaken.

When we last heard from him he was just starting south again, after a short visit to Jerusalem, to explore the south-east of the Negeb, and after he had accomplished this he proposed to make his way round the east of the Dead Sea to Jerusalem. He will thus pass through the country of Moab, and if any other inscriptions are to be found there he will doubtless secure them. His knowledge of Arabic and the Arab character renders him the fittest person to undertake so difficult and dangerous a journey, and the results of his explorations may be looked forward to with great interest.

The Committee of the Palestine Exploration Fund only regret that they have not had larger funds placed in their hands to enable them to carry out their work.

The annual subscriptions amounted last year to about £1,000, the donations to about £2,000, and the collections after meetings and lectures brought in about £500 more.

Upwards of 200 lectures have been delivered in different towns in England and Scotland during the past year, and many local committees have been established.

Thus much progress has been made in making known the objects of the Fund, but further support is still greatly needed.

In conclusion, the Committee desire to return their thanks to Mr. Deutsch, who has done much valuable service in the examination of the inscriptions which have from time to time been sent home;—

To Dr. Chaplin, who has kindly taken charge of the excavations during Captain Warren's absence from Jerusalem, and also of a meteorological station;—

To Mr. Eldridge, the Consul-general of Syria, who has also taken charge of a meteorological station;—

To the Honorary Secretaries of the many local committees established in various towns in this country;—

And also to those gentlemen who have contributed papers to the Journal, which is issued quarterly, and to which we would refer those who desire to obtain a further knowledge of the work which is being carried on by the Palestine Exploration Fund.

The CHAIRMAN: My lords, ladies, and gentlemen,—My title to occupy this chair is hardly stronger than the title any of you might possess who take a great interest in this work, but are not able to follow it out properly in all its details. The foundation of that interest is that we owe to Palestine the greatest debt that one land can owe to another; that it has been the cradle of our religion, and that we read to this day with unabated interest the books that were written there. Considering that, and considering that this English people has shown a greater interest, I may say, than any other people on the face of the earth in the circulation of those holy books, it is very remarkable that in the year 1865 a number of persons of eminence in literature and science met together in the Jerusalem Chamber to discuss the present state of knowledge in regard to Palestine; and whatever might have been their opinions, and whatever line of thought they might have followed, they all agreed in one particular,—that about the land of Palestine, its antiquities, its geology, its zoology, and its science in general, the English people knew marvellously little; and it was in consequence of that meeting that this Palestine Exploration Fund was established. Now, I must beg your indulgence for this particular undertaking on some special grounds. Our business has hitherto lain mainly in and about Jerusalem itself; but besides the religious jealousies we have to encounter there, there is the fact that every step of our knowledge, being of an antiquarian kind, has to be sought for below the ground rather than upon it; and that excavation within the walls of the city, where every foot of land is occupied and will only be parted with for a price, is an expensive amusement, and a somewhat unsatisfactory one. The knowledge which our explorer has been able to acquire for us has been acquired for the most part by sinking shafts, like those which are made in trying for a vein of metal in this country in a mine. Of course when he arrives at the bottom of his shaft he has seen all the strata he has passed through, but he has only a very small clear space at the bottom, and anything beyond that must be got at by fresh mining. I grant that our results on the one hand have not been so great as we desired, but I ask you to grant on the other hand that knowledge so pursued is acquired only under circumstances of great difficulty, and that we may be pardoned if our progress appears slow. But I must say that the work of this Society has been very considerable since we commenced our researches in 1865. And, to leave Jerusalem for a moment, I may say that several scholars have had occasion to change their opinions a little as to the site of the mountain on which the Law was given, in consequence of the researches of Captain Wilson. He has produced a model

of the Sinai district, which seems to show, by an argument which is appreciable by all, exactly where was that mountain on which Moses received and from which he delivered the Law. I cannot claim for our Society that we actually discovered this Moabite stone; and I will hardly touch upon that subject in the presence of Sir Henry Rawlinson, but I may say that if Captain Warren had been on the spot, and if Mr. Klein had adopted a different mode of operation, a more satisfactory result would have been obtained. What was done was that offers were made for the purchase of this object before any attempt was made to get a copy of it. This was quite a wrong proceeding; because the people of the country became aware of the value we set upon this otherwise uninteresting object, and finding the stone was considered so valuable they went to work and broke it up into fifty pieces, thinking they could make a better market of it in separate parts. However, even after this rude process, the stone is likely to be recovered to the world. We have here a thing which is called technically a squeeze;—a piece of porous paper is wetted and forced into the surface and inscriptions on the stone, so that when it is dry and removed it presents the exact appearance of the stone. This is a squeeze of one portion. And, as was well said by Captain Warren, it does not matter much whether London, or Paris, or Berlin, possesses the stone itself, provided we have exact transcripts of it, and know its significance. If when it is fully deciphered it proves as interesting as every scholar believes it to be, we shall have the one sole record, till Captain Warren brings us another, of a people who played an important part in the history of the Jewish people, forming, as it does, a most interesting comment on the third chapter of the Second Book of Kings, where the same name occurs that is commemorated on this stone. I will not venture—caution is the duty of all inquirers—to say whether the King of Moab mentioned in the Scripture is the same that set up this stone, but nothing has been discovered against it.

I will venture, before I sit down, to say a word in order to quicken your interest in this important subject. This is a question entirely of money. It is a question entirely of money for this reason—we have not, at this time of day, to argue whether the lands of the Bible are interesting to us. It is admitted by all. What we wish to direct your attention to is a particular agency by which that interest may be quickened, and our knowledge of the text of the Bible greatly improved and increased. It is an expensive undertaking. We may be asked, and we shall be asked again and again, where are the striking and great results that may be expected from turning up the soil of this ancient country? I tell you we must wait for that. And when we look at what has been done in the four years that we have been at work, I can tell you that there has been much fruit; and so much as to encourage us to proceed for the next four years, and so on further. Before I

conclude, however, I ought to say that two letters have been put in my hand, of a different complexion, though they both bear on the same subject. One is an intimation that an illustrious lady—the Princess Louise—has just become a subscriber to our Fund; and the other is what I am sure you will listen to with great regret, namely, that Mr. Deutsch is very unwell at Oxford, and is not able to be here to-day. He has worked very much at Jewish history, and we should have been very glad to hear him to-day, as we heard his eloquent accents last year. I can imagine no country that ought to be more interesting than this to men of science and historians. There is no country more singular in its circumstances. In the first place, as an able writer well says, this country had some rare qualifications for being the home of the particular people whom God placed there. It was a country in the very centre of the world, on the banks of that great inland lake the Mediterranean, round which the civilisation of the world, its philosophy and its law, have all concentrated, and from which they have emanated to all parts of the civilised world. It was there that at every conclusive period of its history—it was by contact with one or other of these great nations—that its own fate was sealed. But while Palestine was central, it was also retired. As has been observed, it was no highway of the nations; no great communication went through it; and the people who were sent there by God to cherish with peculiar jealousy their own institutions and laws were, to a great extent, insulated by the geological character of the land. It was fit for the home of a striving energetic people like the Jews. We are surprised to read in the Bible of the various products of its soil; it seems almost impossible that one country could have combined them; and when we look at its desolate position now we are tempted almost to doubt whether they were ever combined. Yet that country did produce them in virtue of its great variety of climate. Thus we have its forests on the north, and we have that strange river the Jordan, which, with its lakes, which have been called the eyes of the country, is at the bottom of a deep trench, cutting through the land below the level of a deep sea—a feature unparalleled in every other country in the world. The Sea of Galilee is 300 feet below the Mediterranean, and the rapid river runs down its course, lower and lower still, till it reaches the Dead Sea. Look at its coast scenery, and look at its fertile meadows and garden country, and you will understand why, so long as an industrious people did their best for it, it was a land of corn, oil, and honey. There was every kind of climate there, rendering the soil fit to bear, under proper culture, almost all the good things that have been given to man. And let me say one word about the people that lived there. They were well fitted for the soil wherein they dwelt, and their religion was fitted for them. It was an historical and prophetic religion. They were never to forget their past history; and that history was a history of humiliation. They were never to forget that they had been in the land of Egypt,

strangers and slaves. "Ye shall not vex the stranger nor oppress him, for ye were strangers in the land of Egypt." It is written in their Law in sentiments like that; they were never to forget it. But it was also a religion of hope; they were to watch, and wait, and labour patiently for the coming of a great future for their people; a future they little understood; but yet there was not a Jew among them all who did not feel bound, looking back, to think of the Egyptian slavery, and there was not a Jew among them all who did not feel bound, looking forward, to confess that he looked forward to a glorious future for his people. They have been a parable for the history of all nations. In the Christian religion we, too, look back upon a bondage of sin, and a future of hope, and we feel bound, with one hand in the past and one in the future, to labour and be diligent, and wait and hope for that which God will accomplish for us. So long as this world lasts, so long will the history of the Jewish people be read as high above the history of all the nations of the world. They have done much for its thinking men, for its laws, and for its social order; but this has done more, for it has touched the religious conscience of the world, and led us from things below to things above. (Cheers.) I will now call upon Captain Warren to read his Report of Proceedings.

Captain Warren, R.E., read the Report.

My Lord Archbishop, ladies and gentlemen,—Two years ago, when I had the honour of addressing you on the subject of the Jerusalem Explorations, we had brought sufficient to light to cause several very curious questions to be raised with regard to the ancient topography of the Holy City; but still not sufficient to settle any of the disputed points as to the location of the Temple; we have now made such further progress that, although we are not able to state where the Temple actually stood, yet I believe we are able to say to some extent where the Temple was not, so far as concerns parts about which there had hitherto been utter uncertainty.

Yet much as we have advanced in our local knowledge since our commencement, there is still an immense mine of information below the surface ready to yield its fruits whenever money and influence shall enable the Society to examine and explore those parts within and without the Haram Area which are still inaccessible.

I have been asked on this occasion to give my opinion with regard to the ancient topography, and am told that at the last meeting I attended I gave general dissatisfaction by simply relating what had occurred, without delivering any opinion with regard to results. Now I did so for a very good reason: I had formed no opinion on the matter. Since that time I have certainly advanced in my ideas on the subject, but still I have come to no conclusion; if, however, you are content to listen to the very crude notions I have formed on the subject, I am very willing to put them forward, always reserving to myself the option of backing out of them directly I see a more tenable position.

There are two points of paramount interest in the Holy City, around which all other interests centre.

1. The Temple in which the Jews and first Christians worshipped.

2. The tombs of the Kings of Judah, including the sepulchre of Him who was styled the "King of the Jews."

Now Jerusalem of to-day is a city so transformed by the accumulation of rubbish of fallen buildings, that it is impossible to point to one single spot and say with mathematical precision, "This is the very spot where such and such a building stood;" it can only be said, "This is near the spot where so-and-so may have stood;" and even then you have half-a-dozen dispositions of some of the remarkable sites.

The chief point, therefore, to be had in view in the explorations was the fixing of some point from which we might start forth and map out the ancient city with precision. For doing this two methods were apparent: the one was to obtain the contours of the ground as they existed in olden times, by which means the topographical accounts of the historians could be understood and the places spoken of very approximately located; the other method was by digging about the supposed site of some remarkable building in hopes of finding its remains.

Both of these methods were adopted, and we have now advanced so far as to be able to lay down an approximate contoured plan of the city as it existed in olden times, and we have also examined round two-thirds of the Haram Wall on the outside, some part of which is acknowledged by each theorist to have formed part of the outer court of Herod's Temple.

The Holy City is built upon a series of rocky spurs close to the water-shed, or backbone of Palestine, and it appears to be quite certain from the nature of the surrounding country, that in early times the site of Jerusalem was a series of rocky slopes, the ledges being covered here and there with a few feet of red earth; when, therefore, we get down to the surface of the rock at the present day (provided it has not been cut) we get down to that surface which presented itself to view in olden times before the first inhabitants built their city: as a rule, however, we have found the rock cut away in steps, with old walls built on them and remains of houses; and this we have found over a great portion of that space to the south of the present city of Jerusalem, shown on your card as lying between the valleys of Hinnom and Kedron; thereby showing that that part was once a portion of the ancient city.

A map, therefore, giving the contours of the rock, as found at the present day, gives a very close approximation to what the surface of the city must have been in early times, and there should not be now the great difficulty there has hitherto been in making the topographical remarks of Josephus apply to the ground.

I cannot, however, say that I can lay out the old city to my entire satisfaction, as there is a portion of ground in the centre of the city where the rock has not yet been found, and on the depth of rock here a good deal depends; a good model, however, made from the contoured plan,

will help very much, as at present it is very difficult to keep out of one's mind the lie of the ground according to the old model, and there will be a very great difference between the two; as in some parts of the town the rock crops up to the level of the streets and has been cut away, while in other parts there are from 30 to 70 feet of *débris*.

A very decided valley will appear running down from the Jaffa Gate to the Tyropeon, near Wilson's Arch; and I am under the impression that the pool of Hezekiah will prove to be the Gihon in the valley where Solomon was anointed King.

The Haram Area of Jerusalem is a raised platform about 1,500ft. from north to south, and 900ft. from east to west, sustained by a massive wall rising 50 to 80ft. above the present level of the ground.

There is no question but that within this area the temple of Herod once stood, and that some part of the retaining wall is on the site of, or actually is, a portion of the old wall of the outer court; and on this account the main strength of our working parties had been centred about it, and we have succeeded in gaining a knowledge of the original appearance of this outer wall on the east and south sides, and on part of the west.

We find that the crest of the rocky spur runs from the north-west angle of this platform in a south-west direction, to the triple gate in the south wall; and that at these two points, and in the line between them, the rock is at the surface; towards the north-east and south-west the rock falls rapidly, so that at those angles it is at depths reaching up to 135ft. below the surface; and the enormous wall is at the present day upwards of 160ft. in height.

The platform is nearly on one level all over, and in the centre is a second platform, about 18ft. higher, on which the dome of the rock stands, covering the Sakhra, or sacred rock of the Mahometans, which is said by them to be a morsel of Paradise.

Round the Haram Walls we have found that the great arch called after Captain Wilson is continued by smaller arches, supporting a secret vaulted passage, apparently for the conduct of soldiers, and leading up towards the great towers at the Jaffa Gate; below this vault we have found other chambers of a more ancient date, ornamented with pilasters and capitals; and lower still we have found an old city gateway. To the south we have examined the great lintel, called after Dr. Barclay, which proves to be over a gateway 30ft. high, the sill of which is some 40ft. above the Tyropeon Valley; farther to the south we have found the pier belonging to the arch called after Dr. Robinson, and the actual fallen voussoirs of the arch, settling the disputed point with regard to the existence of this bridge; and below it we have found a great rock-cut aqueduct, with round rock-cut pools, at intervals, apparently for carrying pure water from the upper pool of Gihon round by the pool of Hezekiah, through the town to Siloam.

We have found that the platform is built over the bottom of the Tyropeon Valley at the south-west angle.

Farther round we have examined the wall to the rock, along the south front, and find the portion west of the double gate to differ from that to the east. We have found a great course of stone 6ft. high running from double gate to south-east angle, from which we may assume this portion to be of one date.

Farther on we have examined the curious water passages under the triple gate, and discovered a very remarkable passage under the single gate. Then at the south-east angle we have found the wall of Ophel, joining in with a straight joint; and at the bottom of the wall, 75ft. below the surface, were found those incised and painted characters which have exercised scholars for some time past, and which are by some considered to be Phœnician, and by others Himyaritic.

Passing up along the east wall, we have found a massive exterior wall in front of the Golden Gate, through which we could not penetrate; and farther still to the north we have examined the north-east angle in the most thorough manner, and the rock all around it.

We have got a totally new conception of the Birket Israil (so-called pool of Bethesda). We find it to lie in a valley running nearly south, so that it has rocky sides to its east and west; and we have found a very curious old overflow chamber, through which the water appears to have escaped to the Kedron, and to which there is a secret staircase apparently leading down, in the thickness of the wall, from chambers in the tower at the north-east angle. We have found this tower to be a remarkable construction of over 180ft. in height at present, 135ft. of which is buried in the ground. At the bottom of this we have found painted characters which are also pronounced to be Phœnician. South of this tower we find the valley running through the pool of Bethesda to come out into the Kedron; and we are certain that north of the dome of the rock the valley is over 100ft. deep; then at the northern edge of the raised platform, we have found that remarkable rock-cut ditch which turns out to favour every theory equally. All these, and a hundred other points of great interest, have been opened up, the mere touching upon which would occupy too long, so I shall content myself with trying to deduce some results from the chaos of materials before us.

Though there is no disputing the opinion that the Temple once stood within the Haram Area, there are the most various theories as to its exact position, many of them founded on very elaborate calculations, which are not easy to be controverted; and were it not that each differs in general results, one might be led to suppose that each must be right.

According to these several theories, the Temple courts are made to occupy in the present Haram Area, the south-west angle, the northern end, the centre, the southern end, and the whole area.

But with regard to the Temple itself, there are scarcely more than two opinions—one places it near the sacred rock of the Mahometans, the other places it in the middle of a square of 600ft. at the south-west angle.

Among all these theories, however, I am not aware of any which has not to reject a portion of the account of Josephus, of the Talmud, or even of the Bible itself. Now my impression is, that the question should be solved without rejecting any portion of the topographical accounts, and I feel convinced that if read in a proper light they would be all found to coincide. At the same time, in stating the views I at present hold on the subject, I feel sure I shall be accused of rejecting a portion of the text of Josephus, viz., that portion in which he speaks of the Temple court having been a square of 600ft. For a long time I could see no getting out of his statement about the 600ft., but at last I saw that the question was reduced to an absurdity; that if the Temple was to be only 600ft. square, it must be in three places at once. On this, I looked more closely into the text, and I think it quite clear that Josephus means that it was the court of King Solomon's Temple that was 600ft. square.

There are two passages. In "Antiquities," xv. xi. 4, it will be seen that the wall was 600ft. a side, and that on the east side was a double cloister, which had been adorned by kings before the time of Herod; but the second passage clears up the obscurity of the first, and distinctly states that this 400 cubits, or 600ft. on the east side, was the work of King Solomon, and that it had not been touched by Herod. I have never seen any stress laid upon the passage, so I will take the liberty of quoting the second at length (xx. x. 7). "So they persuaded him (Agrippa) to rebuild the eastern cloisters. These cloisters belonged to the outer court, and were situated in a deep valley, and had walls that reached 400 cubits, and were built of square and very white stones; the length of each stone was 20 cubits, and their height 6 cubits. This was the work of King Solomon, who first of all built the entire temple"; but King Agrippa refused to pull down these cloisters.

Now we are told (l. xxi.) that Herod doubled the size of the Temple enclosure; so that also with finding on the ground that 600ft. was too small, I begin to feel very little doubt that Herod's Temple was of a larger size.

To return to the passage just now quoted, we find that, as late as King Agrippa's time, this eastern cloister of Solomon was standing, and there can be little doubt that it remained intact until the final destruction of the Temple by Titus; but if so, there is no reason why it should have suffered any more than the other massive walls, and, therefore, we should expect to see from 40ft. to 100ft. in height of this grand old wall still remaining. Josephus tells us it was situated in a deep valley; in other words, it formed part, and must still form part, of the east wall of the present Haram Area. Now we have come across stones 20 cubits long, but not any 6 cubits high. The highest course in the Haram Wall is only 4 cubits, therefore we do not appear yet to have come across the formation of this old cloister; but there is still a space of 600ft. between the Golden Gate and the south-east angle quite unexplored, and it may still be in

there. I was so impressed with the idea that we might come across the wall exactly as described by Josephus that for the last few months I made great efforts to get up to it. I must tell you that, running along this east wall, there is a wide Mahometan cemetery, which makes operations very difficult. We, however, got up about 200ft. along the east wall from the south-east angle, and then were obliged to give it up on account of large stones above us breaking in our mining frames; then I tried opposite a point in the wall about 300ft. south of the Golden Gate, and, after getting to within 63ft. of the wall, had to give it up because we were in very loose soil, and just in front of us were some arched tombs, on the surface, in which a caving in of the earth might have caused a settlement.

I was most unwilling to give the matter up, because it appeared to me to be one of the points on which might hang the solution of a great many questions. The only method now remaining for solving the question in safety would be to obtain permission to sink a shaft alongside the wall, through the cemetery; but it does not appear probable that the scruples of the people could be overcome just at present. In default of examining this wall, I feel it premature to offer an opinion, and must suppose the Haram Wall to be of the same description from the south-east angle to the Golden Gate as we have found it through the first 200ft. On this wall, at the south-east angle, were found the characters incised, and also painted, described by some scholars as Phœnician, and by others as Himyaritic, so that this wall may very possibly be of the age of Solomon.

I will now endeavour to convey to you my idea of where the Temple of Solomon was. I have said that the ridge of the rock runs down from the north-west angle to the south-east; and it appears to me that the Temple lay somewhere on this ridge, because it seems incredible that a building which was so conspicuous, and was to play such an important part in the fortification of the city, could have been placed down in a hole. Of course it may be said that the site was not selected by an architect, and that it had to be built on the spot where was the threshing-floor of Araunah; but it seems reasonable to suppose that Divine Providence would have caused the threshing-floor to have been placed in such a position as would have been afterwards favourable for the building of the Temple. And then, again, the ridge of the rock is just the place for a threshing-floor, so as to catch every puff of wind for blowing away the chaff after the corn has been trodden out.

Supposing it to have stood on the ridge, then we must give up all idea of its having stood in the south-west or north-east angles. It also could not have stood at the north-west angle, because we are told there was a valley to the north of it, which Pompey partially filled up when he took the city. The only place which suits at all is the centre: place it here, nearly coinciding with the dome of the rock platform, and it appears to suit exactly. It has the valley to the north; it has the raised platform

of the dome of the rock, which is just about the height of the inner court above the outer; it has the unexplored 600ft. of wall south of the Golden Gate, and overlooking the Kedron. But it will be asked, "What about the south-east angle, with its substructions, and its walls with Phœnician characters inscribed thereon?" I think it was Solomon's palace. This is a suggestion which I put forward without any good reason for it, except that Solomon's palace just fits in there, and we know it was close to the Temple, and yet never have been able to suggest any place. The east wall would then have run down from the Golden Gate to the south-east angle enclosing the Temple and the palace, but the cloisters would have stopped short at the 600ft. and gone round the Temple. The palace would then have measured 600ft. by 300ft., and have extended along the south wall from the south-east angle to the Double Gate. The wall now running round from the Double Gate by south-west angle to Barclay's Gate would not then have been in existence, but would have been built by Herod when he enlarged the Temple courts. At this time he would have taken in the palace of Solomon also, and nothing would remain of it except the substructures, which now, though evidently rebuilt at a period after the destruction of the Temple, still go by the name of Solomon's Stables.

There is one difficulty I feel bound to state. Josephus leads one to suppose that on increasing the size of the Temple courts, Herod took in ground from the north, while in this way he is made to take it in from the south; but it is evident, if the Talmud is to be relied on, that the increase must have been to the south, as the Temple is said to have been at the north-west angle; and if the increase had been to the north, the Temple would have remained towards the south. With regard to this passage of Josephus, I do not feel yet quite satisfied that he means the increase was to the north, as I have found some other passages where in the translation the points of the compass are vague. I will endeavour to explain how this may come about: for example, a few weeks ago Dr. Chaplin was making some inquiries for me of a rabbi with regard to the positions of certain synagogues; the answers appeared obscure, and to test his ideas of the compass he was asked on which side of Jerusalem Mount Olivet was; he immediately replied "On the west," and persisted in it; and then it appeared that he had a different view of the subject, and meant that Olivet was looking west at Jerusalem. In the same way an obscure sentence in the original may have been rendered into English in the reverse sense to what should be attached to it.

This position of the Temple of Solomon in the centre of the Haram Area, agrees with the position I suppose Zion to have occupied, which on your card is somewhat north of the word Acra; it also agrees with the direction of the boundary line between Judah and Benjamin as I suppose it to have been drawn.

There have always been several reasons in favour of the Virgin's Fount being considered En Rogel, though many place it at Bir Eyub; but M. Ganneau's recent discovery of a rock with a name closely

approaching to Zoheleh, appears to be greatly in favour of the Virgin's Fount. We are told that the line of boundary passed Zoheleh to En Rogel and thence up the Valley of Hinnom. Now if the Virgin's Fount is En Rogel, then the Kedron must be one with Hinnom.

My impression, then, is that the boundary line after passing the word Siloam on your plan went up the Valley of Kedron or Hinnom as far as the letter K; then went due west across the Haram Area, south of the word Acra, and then across by the Jaffa Gate and Russian property to Lifta.

By this disposition Zion, the citadel, comes in to the tribe of Benjamin, and its low town partly into Benjamin, and partly into Judah, in accordance with the historical accounts; while the Holy of Holies comes into Benjamin, and a portion of the southern part of the Temple courts comes into Judah, exactly as is described by the Talmud when it says that the portion of the Temple supported on arches was in Judah, while that on the solid rock was in Benjamin.

Some of these dispositions are somewhat novel, but you will see that in this way a heap of difficulties are removed; and no fresh ones, as far as I can see, brought up: at the same time, the books of the Old Testament, the Talmud, and Josephus, are found nearly to coincide.

The whole question of the topography is rather one of years than of days, and it is impossible to enter into such a question in a few minutes; but I may mention with regard to the Birket Israil (the so-called Pool of Bethesda) that I believe the present high walls to be the work of the Saracens, and therefore the fine porches may still be found on the southern side under the Haram Area, should permission ever be obtained to examine the wall.

It was a great disappointment to find that the grand aqueduct in the Kedron Valley had never been completed. We had cleared it out for eighteen hundred feet until we had passed Bir Eyub; we had come to a great grotto cut into the form of a pool, with an upper and lower aqueduct leading to it; then a system of staircases cut in the rock leading up by seventy or eighty steps. Suddenly we found the work had never been completed, the staircases led nowhere, and the inhabitants of the city lost their chance, which some of them talked about, of our getting up to the sealed fountains of Jerusalem.

I cannot find that we are any nearer the solution of the difficulties about finding the tomb of David and other kings of Judah, and it appears to me to be quite premature to speculate upon the matter so long as we are uncertain whether the valley from the Damascus Gate flows east to the north of the dome of the rock, or whether it divides Moriah from the western part of the city by a deep valley.

Our excavations for the last few months have been devoted almost entirely to the east wall of the Haram Area, and the last result was a valuable negative one. I could find no trace of any pier in connection with the springing of the arch on the eastern side near the south-east angle.

Some persons have supposed that there may have been a bridge here across the Kedron. I calculated the span of the arch would have been about 25ft., and drove a gallery near the rock between 15ft. and 45ft. from the wall, without finding any signs of the pier; and yet the pier, if it ever existed, should have been still about 30ft. in height, judging by the quantity of *débris* about. I think, therefore, it is probable that no bridge existed then, and that, as M. de Saulcy suggests, the arch was to support a projecting balcony. I do not see any reason for there to have been a great bridge all across the Kedron for the taking over of the red heifer. I should imagine that if an arched causeway had been raised a few feet above the ground, and taking the slope of it, the animal could have been driven down and up again without any difficulty.

The last result we obtained was to find that the stones in the east wall have rough projecting faces, except near the angles, where they are highly finished; this may account for the allusion made in the Psalms to the polished corners of the Temple.

It should be observed, however, that the portions of the wall north of the Golden Gate differ materially in detail from that to the south, and appear to have been built at a different period.

Besides the excavations at Jerusalem, we have been occupied in making reconnaissances outside; a plan has been made of the plain and part of the hill country between Jerusalem and Gaza. The fellahîn here were not very amiably disposed when they found what I was about; some of them had been working down at the Suez Canal, and they took it into their heads that I was surveying the country for the construction of a canal between the Mediterranean and Dead Sea, through the Judean Mountains, which they considered would be highly objectionable, and would be the signal for their lands being given up to the Franks.

At one place, Ekron, a Mahometan came up very mysteriously and said that all the people in the village supposed themselves to be descended from Jews, who had been forced to embrace the Moslem faith.

Several of the Mahometans down there seemed to think they had a different God to the Jews and Christians, and some of the more liberal of them said they had no objection to our having a heaven, provided we kept out of their paradise. I was asking one liberal-minded man what became of the souls of the evil-disposed Mahometans on the day of judgment. He said that after all the good ones had walked over the thread passing from the Haram Area to paradise, the bad ones would sit shivering on the brink calling to Mahomet, who would take no notice of them. Then they would go to Abraham and ask him to help them, but he would say the Jews were his *protégés* and he could not help them; then they would go to Christ, but he would say he had enough to do in looking after the Christians; then they would go to Moses, who would get very angry and say he would not help anybody, as he was disgusted with mankind; then they return to Mahomet and beseech him to save them, upon which, after a little thought, he turns them all into fleas and turns himself into a sheep, then they all hop into his wool, and he carries them off in triumph to paradise.

On the east side of Jerusalem I have examined the country on both banks of the Jordan, and believe we are the first Europeans to go up and down along the banks of this river between the Dead Sea and Tiberias. Lieut. Molyneux, R.N., and subsequently Lieutenant Lynch, of the United States, went down the stream some years ago in boats.

We managed to get along in this way: we took one soldier from the Government, and when we passed a Bedouin encampment we sent in and told the sheikh he must provide us with an escort to the next encampment; in this way we went from tribe to tribe with very little trouble, and at a cost of about two dollars a day. The fact was, we came on them before they had time to think about the matter; if we had attempted to make a contract we should have had to pay at least £5 a a day—that was the least sum one of the sheikhs would go for.

I was also engaged in surveying part of the Judæn wilderness to east of Jerusalem, and here we had a guard of fellahîn, who appear to be paid for running away in time of danger, and they perform their parts admirably. When they see a hostile party approaching to attack, they note the tribe to which it belongs, and then bolt to give information; the party then comes up and robs you if you don't resist, but is afraid to do you much harm, because the tribe is known. Should the guard remain with you they might be disposed of by the hostile party, and then you would be completely in its power. As a rule, however, it is very seldom that life is taken in Palestine, except when individuals are caught alone, because there is a blood revenge, and if a man from one tribe takes the life of another, he must either pay blood-money or one of his tribe will be killed in return.

I have twice had to protect my own guard; once we were jogging along quietly and some black Bedouins came and took his gun away from him, and we went among them and got it back again.

On another occasion I was sitting in my tent when the guard suddenly rushed in and crept under the table, and on looking out I saw two Bedouins stalking him down; it turned out that they were playing him a practical joke. He had a blood-feud with another tribe, and these men were friends of his who had disguised themselves in order to give him a fright.

On the east of Jordan I have made a reconnaissance of nearly all the country included between the two rivers Zerka, of which no map previously existed. South of Amman we came upon a piece of elevated country about four miles square, literally covered with ruins of temples and houses. It must have been most densely populated, and even now it swarms with Bedouins. From one hill we saw over twenty encampments, in one of which there were upwards of sixty large tents.

It was considerably to the south of this, by one day's journey, that the now well-known Moab Stone was discovered by the Reverend F. Klein, of the Church Missionary Society: he found it in the ruin of Dhiban, which had not previously been visited since 1809 by Irby and Mangles.

I have brought home the squeezes and the small portions of the stone which I have been able to get.

No doubt it is unfortunate that the stone should have been so barbarously destroyed by the natives, but things are so uncertain in that country that I consider it a happy chance that we should have been enabled to obtain the information we are already in possession of.

Last summer I was occupied in examining the temples of Cœle Syria, and have made plans, I think, of nearly every one. They do not appear to be connected with the older worship on top of Mount Hermon; rather, I think, they were devoted to hero-worship. We found six or eight Greek inscriptions in the Lebanon, and several more at Jerash, which have not yet been published.*

I paid a visit to the Governor-General of Syria, at Damascus, and he was delighted to hear of the reconnaissance which had been made on the east of Jordan, and asked for a copy of it; he also offered to provide us with an escort of cavalry at the public expense if we would continue the survey down as far as Kerah and give him a copy of it. It is not likely that such a chance should occur again, and it is to be hoped that the scheme will not fall through for want of money.

Our new Pasha at Jerusalem is very favourably inclined to the Palestine Exploration Fund: he has been at European courts, and understands that we have no sinister objects in view, and will probably give every help in his power, provided he is kept fully acquainted with what is going on.

The foreign consuls have shown themselves very much interested in our work, and I have received great support from them all at one time or another, and also from the ladies and gentlemen attached to the religious bodies at Jerusalem.

The Jews are also highly interested now that they find that we do not interfere with their tombs; and on one occasion, after our finding the vaults at Wilson's Arch, they came to visit them in swarms, and invited me to a synagogue, where they always put up a prayer for Queen Victoria, and they added one in for the Palestine Exploration Fund and its executive; they were always on the look out for our finding water, as they have a tradition that on the finding of a third spring their Messiah will come, and they consider two to have been found already.

In conclusion, I would tender my thanks to those visitors to Jerusalem, and especially the ladies, who have been down our shafts, and sympathised with and advised me on many difficult subjects.

Sir Henry Rawlinson: My Lord Archbishop, ladies and gentlemen,—After the very lucid and interesting statement which has been made to you by Captain Warren, it is comparatively easy for me to discharge the duty assigned to me—that of moving the first resolution—a resolution expressing our sense of the importance of the work upon which Captain Warren has been engaged, and tendering a vote of thanks to him for the valuable services which he has rendered to the Palestine Exploration Fund. (Cheers.) Now it would be superfluous on my part

* The Lebanon inscriptions will be found *supra*, pp. 328–330. The Jerash inscriptions will appear in the next *Quarterly*.

to attempt to follow Captain Warren in his Report. I should rather wish to draw attention to his personal merits on this occasion. The public at large—and when I say the public, I use the word advisedly, because I am satisfied that there is no one in this Christian country who does not really feel a deep and sincere interest in Palestine—the public I say, at large then, can appreciate the results of Captain Warren's works; but they cannot appreciate and do not appreciate the cost at which those results have been obtained. No one who has not had personal experience in similar operations can realise the personal labour and the wear and tear of mind and body which the traveller undergoes who has been situated like Captain Warren. (Hear, hear.) It is not merely that he has ordinary engineering difficulties to encounter, that he is exposed to the influences of an oppressive and unhealthy climate, and that he is dependent upon lazy and incompetent workmen for his operations; but besides all this he has to struggle, it must be remembered, to say the least of it, with an unsympathising Government. (Cheers.) If we will only throw back our recollections for a few years, we cannot fail to acknowledge that twenty years ago the excavation of Jerusalem would have been an absolute impossibility. Jerusalem itself, with the Mosque of Omar and the sacred precincts, was forbidden to any Christian, and it was at the risk of his life that any one attempted to penetrate them: and even now, notwithstanding the spread of enlightened feelings, and the diminution of fanaticism, it cannot be denied that the Mohammedan Government look with much disfavour upon the supposed desecration of the sacred shrines. I do not, however, wish to be hard upon the Turks in this respect; for I would appeal to the Chairman as to what he would think of a party of foreign *savans* commencing excavations around York Minster. I think we are bound to make allowances for the sensitiveness of people with regard to their sacred edifices. (Hear, hear.) But what I do feel is that this natural sensitiveness on their part makes it more praiseworthy in Captain Warren that he should have succeeded as he has. It speaks volumes in favour of his patience, his temper, and his diplomatic skill, that he should have overcome these difficulties to such an extent, and achieved the results he has obtained. (Cheers.) Now, my Lord Archbishop has kindly alluded to myself in connection with the Moabite stone; and I would ask permission to say a few words on this subject, which may be called the great discovery of the year. It is a discovery which is no doubt of very great importance, and I think I have perhaps some right to make a few observations upon it, for two reasons:—First, because I have been fortunately instrumental in bringing to light a considerable number of similar monuments bearing upon the early history of the Jewish nation—(cheers)—and also because I believe I was the first person in England who suggested that the Omri of the Dhibân inscription was the king of that name mentioned in Scripture—the founder of Samaria, a king whose name has been brought to our notice on the famous black

obelisk in the British Museum. That is admitted by all oriental students, and I am gratified to be the first to have suggested it. (Hear, hear.) I do not want to take an exaggerated view of the Moabite stone. It has been said on the continent that it is of great importance, but not of that paramount importance that is claimed for it by some people. The great value I would wish to deduce from it is that it ought to be, and is, in fact, an immense stimulus to further research. (Hear.) It is almost impossible, remember, that this can be an isolated record. (Hear, hear.) We already have evidence that the nation adjoining the Jews—the Assyrians—were in the habit, on every occasion of a royal expedition or a conquest, of erecting a commemorative record, and leaving it on the spot as a local memorial. We are also aware that the Phœnicians were in the habit of inscribing sarcophagi and slabs in a similar way. We now find that the Moabites pursued the same practice, and commemorated their local conquests by monumental records. The inference is inevitable that this was the general custom among the Semitic nations inhabiting the country between the Mediterranean and Syria, and that if we are to examine the countries adjoining Palestine, Syria, the country of the Ammonites, and the country of the Moabites, we shall find similar monuments. Now with regard to the Jews themselves, I think it is doubtful whether they ever did erect any such monuments. There is no allusion that I am aware of in the historical books of Scripture to the erection of similar trophies, and I am inclined to think it was regarded as an idolatrous practice, and was therefore forbidden; but in the surrounding nations we have every reason to expect that similar monuments are to be found, and the discovery of this special stone ought to be an incentive to additional research. (Hear, hear.) There is another point of great value to be deduced from the discovery, and that is in relation to the Phœnician characters. Now the squeezes which the meeting will be able to see here exhibit the inscription in its natural size, and in the Phœnician character. There is no sensible difference in the Phœnician characters used on the Moabite stone on the shores of the Mediterranean and the same characters used on the metal weights and clay tablets of Assyria; and I may also quote the stones with builders' marks which have been found in Jerusalem, also with the Phœnician characters. The inference is, therefore, inevitable, that the Phœnician character was the only cursive character used by the Semitic nations; and in that way I should feel confident that if any monument of that early period is found in Jerusalem, it will be found in that character. The Hebrew character did not, I fully believe, exist, even in any modified form, till after the return of the Jews from their captivity. If that can be proved it is an important piece of information, and we shall have been mainly indebted to this Moabite stone for arriving at such a result. (Hear, hear.) There is only one other observation that I will venture to detain the meeting with, and that is with reference to Captain Warren's conduct in respect to this

Moabite stone, Now I followed this matter with much interest throughout, and *I must say he has behaved throughout in the most straightforward and honourable manner.* (Hear.) If any national jealousies have been imported in this question, they have not been imported into it by him or through him. (Hear, hear.) He stated openly that it was a matter of comparative indifference to him, as he knew it would be to the Palestine Exploration Fund, whether the stone was preserved in the Museum of Berlin, or Paris, or London. What he aimed at was that the stone should be preserved intact, and that, at any rate, an accurate copy should be preserved for the knowledge and benefit of all mankind. That his hopes were frustrated, and that the stone was broken, must be a cause of universal regret, but that is owing to circumstances for which Captain Warren cannot in any way be held responsible. (Cheers.) Now I will beg leave to read the resolution, and to recommend it to your favourable consideration. (Loud cheers.)

Mr. Samuel Morley, M.P.: Ladies and gentlemen,—I feel that I have no qualification that justifies my occupying more than a single minute of your time; but, as a contributor to the funds of this Association and a member of the Committee, I am desirous to join in the expression, first of our continued interest in the work in which we are engaged, and then of obligation to Captain Warren for the work he has accomplished on our behalf. There is nothing that can in any sense be called denominational in this work. (Hear.) We have to deal with facts, facts as distinct and hard as the stones which have been sent home from our excavations. It should be borne in mind that the extent of the work we accomplish must be measured by the amount of money we receive. I am here to renew the expression of my own readiness to assist the Fund, as I have hitherto done somewhat substantially, and to impress upon all who are present here to-day not to be content with listening to the deeply interesting statements which have been made, and saying "Hear, hear" to a vote of thanks to those who have been helping us, but to give a proof which Englishmen well understand of their interest in the work, by contributing largely to the funds, which I undertake to say will be wisely expended. (Cheers.)

Professor Donaldson: My Lord Archbishop,—At this late hour of the afternoon it is not for me to occupy much of the time of this meeting. Captain Warren has described particularly well the operations which he has carried on in Jerusalem, and which I saw in the year 1868. Allusion has been made to the manner in which Captain Warren has drawn up his Report, and to the way in which he has conducted himself throughout; but what struck me throughout was his frank way of speaking of his investigations. He did not pretend to make any very great discoveries of large importance, but the results were satisfactory to himself. In accompanying him along the valleys of Jerusalem we went up a long aqueduct which he had discovered, 1200 feet in extent; the intense heat was almost insufferable, and it made us understand what he must have undergone.

(Hear.) I will briefly allude to the Moabite stone. After reading the notice of its discovery in the *Times*, I was engaged in examining a stone from the Testamentum Augusti at Ancyra, and which narrates facts just in the same style as they are related in this. There were two inscriptions, one in Latin and the other in Greek, and in the language, just the self-same laudation, "I did so and so," is repeated in the inscriptions of Augustus at Ancyra. The valley of the Jordan is extremely interesting; but I was especially interested in following Captain Warren's excursion to the northern part about Hermon, and up to the valley of Cœle-Syria. I believe if you were to draw a line across the country from Sebaste to Jerâsh, you would find that all the Roman works are to the north of that line. At Jerusalem there are no Roman works; they are rather Greek than Roman. Captain Warren found upon Hermon those interesting temples which are illustrated in the last number of the Society's *Quarterly*, and which are so extremely interesting. We knew nothing about them at all compared to the extent which Captain Warren has revealed to us. I feel that a large line of separation will have to be drawn as to their dates, which at some future period will be extremely interesting. I will only add that, if Captain Warren returns, I hope the funds will be sufficient to allow him to have an architect draughtsman with him, because we especially want the details of the monuments which he has discovered. I beg pardon for intruding so long upon the meeting, but I could not forbear saying a few words to bear my testimony to the value of the researches by Captain Warren. (Hear, hear.)

The resolution was carried unanimously.

The Very Reverend the Dean of Westminster: The resolution which I have to propose is this,—"That it is desirable that special efforts should be made to raise funds to complete the survey of the whole of Palestine, and to proceed with the other objects for which this Society has been established, namely, the accurate and systematic investigation of the archæology, topography, geology, and natural history of the country for Biblical illustration." I am extremely sorry that the gentleman who was to have moved this resolution, Mr. Deutsch, has been prevented by illness from being present on this occasion; otherwise you would have heard from him much more than it is in my power to say to you on the subject of what is unquestionably by far the most interesting feature of the Palestine Exploration Fund this year,—the discovery of the Moabite stone. If in each year something is discovered which creates as much interest and is likely to prove as important, it will be quite a sufficient reward for our labours. (Hear, hear.) With regard to this point I would once more dwell upon the point upon which Sir Henry Rawlinson has insisted, —that the importance of the discovery of the Moabite stone is not so much in itself—important as that is—as in the proof it furnishes that such stones, such trophies and inscriptions, are likely to be found in other places. Down to this time the most provoking part of Palestine

Exploration was that, whilst the natural features of the country might be fairly well known, and tombs of great antiquity were found in abundance, yet that nothing whatever was found in the way of writing. It was most tantalising to me in Palestine, and must be so to all travellers who come there from Egypt, where every wall and tomb is covered with inscriptions. To come to a country where one is naturally still more desirous to find inscriptions, and to find nothing of the kind at all, is a great disappointment; and the impression was gaining ground that nothing was to be found. This has been dispelled by the discovery of the Moabite stone; and, as it has been said that as "there are more fishes in the sea than are caught," so we may say that there are more Moabitish and Jewish stones than this which has been found at Dhibân. (Hear, hear.) Sir Henry Rawlinson said it was improbable that any such trophies were erected by the Jews themselves. Even if we did not find trophies erected by the Jews, it would be desirable to find those which were erected by neighbouring tribes; but I cannot give up the hope of such trophies being yet discovered. I have taken the liberty of sending for a Bible from the library of the Royal Institution, to refer to the fifteenth chapter of the First Book of Samuel, which describes Saul's victory over the Amalekites; and we read that it was told Samuel that "Saul came to Carmel, and, behold, he set him up a place, and is gone about, and passed on." Whatever may be the exact meaning of the word in the original, which is there translated "place," it looks very much as if it were meant for a "trophy." The Septuagint translated it by a word similar to "erected a triumphal arch;" and it was probably some kind of trophy. Now if that is recorded in the single case of Saul, there is nothing to prevent its having taken place again and again; and I trust that in this survey which we have in progress, when they come to Carmel—the southern, not the northern Carmel—they may find some trace of this trophy. (Hear, hear.) I will say no more now than again to remind you how much remains to be, and that in this Exploration, at every turn, such monuments and inscriptions may be, found as interesting as the Moabite stone.

The CHAIRMAN: Mr. George Groove will second the resolution. (Cheers.) In calling upon Mr. Grove, I must venture to say, in the presence of my brother officials of this Society, that he is virtually the founder and institutor of the Society, and has done wonders for it throughout. (Cheers.)

Mr. GEORGE GROVE: All I have to say has been already said to you by Captain Warren in his interesting and touching statement, and in the general considerations which have been put before you by the Archbishop, by Sir Henry Rawlinson, and by the Dean of Westminster in his own peculiar manner, much better than I can hope to say it; but there are one or two things which, as my heart is very much in this work, I may be perhaps allowed to bring before you. The resolution which I have to second mentions the desirability of special efforts to raise funds to complete the survey of the whole of Palestine.

It will be within the knowledge of the meeting that a great deal has been done already to the survey of the country; but I think we should not deceive ourselves, and that at present the object we should have in view and keep steadily before us is Jerusalem,—the exploration of Jerusalem itself. It is there that we should concentrate our efforts, and everything we do there will tell with most effect. I have heard some remarks from the lips of one of our own speakers, and I heard it from others outside on one or two occasions, as if our progress had not been encouraging, that our progress has been rather discouraging than otherwise. But I cannot think how any one, who can have listened to the statements of Captain Warren, can consider that to be the case. Our progress has not only been not slow, but, considering the enormous difficulties which have been put in our way, and the single-handed manner in which Captain Warren has had to fight them, our progress, instead of being slow, has been encouraging and quick. It is all very well to say that nothing has been found yet inside Jerusalem, because we have not been allowed to get inside. But we do not intend—the governing body do not intend—to drop this thing. (Cheers.) The people of England, whenever the subject has been brought forward, have responded to it in the noblest possible manner. The religious and intelligent public, when applied to, have only asked what we proposed to do with the money; and when we have said, "It is to explore Jerusalem," they have given it in large sums. We do not intend to let the exploration of Jerusalem slip or go to the wall at all. (Cheers.) What we intend to do, please God, is to get inside the Haram Area, and to explore there in the same way as Captain Warren has outside. It is hardly fair to say that our exploring in Jerusalem is the same thing as if foreigners were to come and explore at York Minster or Westminster, because we know that if we had the same chance of exploring as the Turks have had at Jerusalem, we should have done it ourselves. I speak of this in the driest possible way; and as an official of this Society, I say, back us up with your money; we want it now; we must have a large sum to enable us to resume the excavations which Captain Warren has so successfully proceeded with. (Cheers.) I hope he may be induced to go out again. If not, I hope some one will be found to take his place, and carry it on with equal devotion. I hope that our Report will go out to every man and woman who believes the Bible to be the greatest, and most interesting, and most beautiful document in the world, and to every man and woman who believes that an intelligent and proper exploration of the country in which that book was written will make that book more intelligible. Let those who cannot give largely give small sums; but let us have these small sums in large numbers, for we shall want a large sum of money to enable us to go on with our labours. (Cheers.) I need hardly say anything more after all that has been already said. If I were to do so, it would only be to repeat the great personal interest I feel in the work. I do feel a tremendous confidence that the work which has been carried

on so far will be brought to a happy and successful issue. (Loud cheers.) I take this opportunity, in conclusion, of correcting a little error which I made in a letter which I wrote to the *Times*. I said that Mr. Drake and Mr. Palmer had been sent out in the employment of the Palestine Exploration Fund; whereas Mr. Drake went out at his own expense to investigate the natural history of Palestine, and was aided by the University of Cambridge. I am happy to have the opportunity of acknowledging that mistake. I have great pleasure in seconding the resolution. (Cheers.)

The resolution was carried unanimously.

Mr. Morrison proposed a vote of thanks to the Chairman.

Captain Wilson, in seconding the vote of thanks, said: When I consider that it is hardly six years since I first went out to Jerusalem, and that at that time it was almost an unknown town, I think it is with great satisfaction that the Palestine Exploration Fund can look upon the diagrams now in this room representing the results of the explorations which have been carried on by Captain Warren. (Hear, hear.) When I went out everybody followed me with gloomy predictions. I was told that we could not go out at night, and that we could not carry on the survey in a place where Mohammedans ruled; but when we brought back the plans we had made there, people began to alter their opinion. I am very glad that Captain Warren has followed the matter up, and brought to light so many interesting features in the topography of Jerusalem. I think it will be a most important thing if he can give us a plan of Jerusalem as it was in the time of our Saviour, and then people can build their different theories upon that. (Hear, hear.) As you are aware, I was in Sinai last year, engaged in the Ordnance Survey of that country. His Grace has kindly alluded to our labours there, and I am happy to find that they have been—as the editor of the "Speakers' Commentary on the Bible" has been kind enough to say—of very great use to him with reference to the various points connected with "The Mountain of the Law in the Peninsula."

The resolution was carried unanimously.

The Chairman: I am very much obliged to Mr. Morrison and Captain Wilson for the mode in which they have proposed and seconded this vote, and to the meeting for the manner in which you have received it. I take such a vote to express general satisfaction in the purposes of a public meeting; and I will just mention that one gentleman has given me a mute testimonial of the same feeling in the shape of a card, bearing upon it a short but intelligible inscription—to wit, the amount of the donation he intended to give to the Society. I will gladly receive, either now or through the treasurer, similar votes of thanks to myself. I have only to thank you, and to say that I think you have had a very satisfactory account of the proceedings of the Palestine Exploration Fund. (Cheers.)

LIST OF SUBSCRIPTIONS.

MARCH 24TH, 1870, TO JUNE 30TH, 1870.

a denotes Annual Subscriber.

*** If any omission or mistake be observed in the following lists, the Secretary will be very glad to be informed of it, and will rectify the error in the next *Quarterly Statement*.

	£	*s.*	*d.*
HER ROYAL HIGHNESS THE PRINCESS LOUISE	10	10	0
*a*Lord Lawrence	5	0	0
Sir Moses Montefiore	10	0	0
Bishop of London	10	0	0
Bishop of Chester (2nd Don.)	10	10	0
Sir D. A. Baxter	25	0	0
Hon. Robert Marsham	20	0	0
*a*Sunday School Union	5	5	0
W. Spiking, Esq. (2nd Don.)	5	0	0
Ebenezer Clarke, Esq., jun.	0	5	0
J. Swainston, Esq.	0	10	6
*a*Rev. M. E. Benson	1	0	0
Per Miss Howitt	1	1	0
*a*Miss Peachey	1	1	0
*a*A. W. Hann, Esq.	1	1	0
*a*Rev. G. Despard	1	1	0
*a*J. Farish, Esq.	1	1	0
*a*J. Hornby Wright, Esq.	1	1	0
*a*J. W. Overbury, Esq.	1	1	0
P. H. Gosse, Esq., F.R.S.	2	2	0
Per H. Smith, Esq.	0	14	0
J. Dyer, Esq.	0	10	0
E. N. Buxton, Esq.	1	0	0
Alex. Fraser, Esq.	0	10	0
N. Powell, Esq.	1	0	0
J. Bulmer, Esq.	2	0	0
Rev. T. Cornthwaite	0	10	0
*a*F. Gordon, Esq.	1	1	0
Mr. Snow	0	5	0
Henry Walmisley, Esq.	5	0	0
Mrs. Neve	0	5	0
*a*Mrs. Killick	1	1	0
Collected by Miss Killick	0	9	0
N. R. Beddowes, Esq.	0	2	6
*a*Morton Edwards, Esq.	0	10	0
Mrs. Wasey	1	1	0
Rev. E. B. Creek	0	10	0
Miss Gardiner	0	10	0
*a*Rev. F. G. Burnaby	1	0	0
*a*J. A. Howden, Esq.	1	1	0
*a*R. H. Dawson, Esq.	1	1	0
Mrs. Warner	0	10	0
*a*Mrs. Sturt (£1 1s. *a*.)	1	5	0
*a*Miss Barlow	1	1	0
*a*Mrs. Walker	1	1	0
*a*Thomas Taylor, Esq.	0	5	0
*a*A. M. Jones, Esq.	1	1	0
*a*James Monteith, Esq.	2	2	0
Per A. Poole, Esq.	2	5	0
Per W. Appleford, Esq.	0	8	6
*a*Miss E. Brooke	2	2	0
Rev. W. H. Twemlow	2	0	0
Mr. Thomas	1	0	0
Rev. John Monteith	2	0	0
Miss Griffith	1	0	0
*a*William Cole, Esq.	1	1	0
Per Mrs. Bremer	0	10	0
Per Miss Grant	1	1	0
*a*W. F. Hutchinson, Esq., M.D.	1	1	0
*a*J. W. L. MacKean, Esq.	0	10	6
*a*Rev. T. M. R. Barnard (10s. 6d. *a*)	0	12	6
*a*Mrs. Trigg	0	2	6
Mrs. Hume	0	5	0
Miss Garnet	1	1	0
*a*Rev. George Austin	0	10	6
*a*Rev. J. W. W. Taylor	0	10	6
*a*Rev. S. L. Warren	1	1	0
*a*Rev. M. T. Farrer	1	1	0
*a*Rev. W. F. Birch	1	1	0
*a*Rev. H. Anderson	0	10	0
Per Lieut. Warren	2	0	0
*a*C. C. Plowden, Esq.	2	0	0
*a*Rev. G. D. W. Ommaney	1	0	0
*a*C. Richardson, Esq.	0	5	0
*a*E. W. Chapman, Esq.	0	15	0
G. Pritt, Esq.	1	2	6
*a*Rev. R. K. Codrington	1	1	0
Per Miss Williams	0	10	0
Captain Mackenzie	1	1	0
Rev. H. De Winton	1	1	0
Per Stephen Gibson, Esq.	0	13	0
*a*Rev. Cator Chamberlaine	1	0	0
*a*Rev. Dr. Porter (£1 *a*)	2	0	0
Rev. G. A. Festing	1	1	0
*a*W. J. Booth, Esq.	1	1	0
*a*Mrs. Cleaver	1	0	0
W. G. Wodehouse, Esq.	0	10	0
*a*H. S. Patterson, Esq.	1	0	0
*a*Rev. T. Ladds	1	1	0
Rev. Douglas Boutflower	1	1	0
*a*John P. Bell, Esq., M.D.	1	1	0

	£	s.	d.
C. W. Rockwell, Esq.	10	0	0
Per A. E. Hobson, Esq.	0	10	0
*a*T. Hall, Esq.	1	0	0
*a*Rev. O. Vignolles	0	10	6
*a*C. H. Millar, Esq.	3	3	0
*a*Edward Millar, Esq.	2	2	0
Per E. Brownen, Esq.	1	1	0
*a*Miss Skirving	1	1	0
Per Rev. R. W. Fiske	0	2	6
*a*E. Barret Kearney, Esq., M.D.	1	1	0
G. H. Skelton, Esq. (3rd Don.)	5	0	0
*a*Miss Davis	0	10	6
*a*Miss Hornidge	0	10	6
*a*Rev. Isaac Taylor	1	1	0
*a*T. Smily, Esq.	0	10	6
W. Giles, Esq.	2	0	0
*a*W. F. Lawrence, Esq.	1	0	0
*a*Mrs. Guise	1	0	0
*a*Col. Palliser	1	0	0
Rev. F. T. Colby	1	1	0
Rev. F. Baldey	1	1	0
Edgar Drummond, Esq.	5	0	0
Edgar Lewis, Esq.	1	1	0
*a*P. C. Bevan, Esq.	1	1	0
Per E. Leech, Esq.	1	1	0
*a*Rev. T. Woodruffe	1	1	0
*a*James Hilton, Esq.	2	0	0
Per G. R. Ritson, Esq.	0	4	0
Per C. H. Hensen, Esq.	0	3	0
Anon.	0	2	6
Lieut. W. Warren	1	0	0
*a*Sinclair Mulholland, Esq.	1	1	0
W. H. Wills, Esq. (2nd Don.)	5	0	0
Per Miss Patterson	0	3	6
Per Miss Hellyer	0	11	3
John Player, Esq.	1	1	0
Joseph Walker, Esq.	0	2	6
*a*Miss Williams	1	1	0
Miss Deey	1	0	0
Henry Vaughan, Esq.	20	0	0
*a*Rev. A. M. Rendall	1	1	0
Per John A. Hartley, Esq.	1	0	0
Mrs. Jones Howell	1	1	0
Mrs. Butt	1	1	0
Rev. J. F. Cobb	1	0	0
W. Martin Cooke, Esq., M.D.	1	1	0
*a*H. F. Bowker, Esq.	1	1	0
J. S. Budgett, Esq.	10	0	0
*a*T. Cook, Esq.	1	1	0
*a*Rev. H. Caddell	1	1	0
*a*Mrs. Anderson	1	0	0
Miss Greathead	2	2	0
*a*Bow Lane Sunday School	1	1	0
Lieut.-General A. Clarke	5	5	0
*a*Miss Zornin	1	0	0
*a*Rev. R. E. Edwards (£1 1s. *a*)	1	5	0
*a*Miss Fisher	2	2	0
Lieut.-Gen. Gascoyne	1	0	0
Sir Walter C. Trevelyan	5	0	0
*a*Robert Jackson, Esq. (10s. *a*)	1	0	0
*a*Thomas Dobson, Esq.	1	1	0
H.S.B., per Archbishop of York	5	0	0
Lady Smith	5	0	0
Henry Peto, Esq.	1	1	0
*a*Rev. D. L. Furber	0	10	6
Mrs. Vaux	0	5	0
*a*Mrs. Townsend	1	1	0
*a*Mrs. Hampton	1	1	0
*a*Mrs. Russell	1	1	0
Miss Jones Parry	1	0	0
James Abbott, Esq.	1	1	0
Rev. G. W. Cole	0	2	6
*a*F. Howard, Esq.	2	2	0
*a*Rev. E. Baynes Badcock	1	1	0
*a*Rev. Dr. Bayley	1	1	0
John Eccles, Esq.	0	10	0
*a*Miss Relton	0	5	0
*a*R. W. Mummery, Esq. (10s. *a*)	0	11	6
Per Miss Fountain	0	11	0
Sir Rutherford Alcock	5	0	0
*a*W. Edmunds, Esq.	1	1	0
*a*Rev. R. W. Church	1	0	0
*a*Rev. E. D. Stone	2	2	0
*a*Mrs. Gott	1	1	0
*a*J. Morris, Esq.	1	1	0
*a*Rev. T. Helmore	0	10	0
*a*Mrs. B. Kilburn	1	1	0
*a*T. G. Kent, Esq.	2	2	0
*a*Rev. E. S. Dewick	2	2	0
*a*C. H. Hawkins, Esq.	0	10	0
*a*Dr. Turner	0	5	0
*a*Mrs. Calvert Jones	1	0	0
Mrs. Newman Smith	6	0	0
Edward Fry, Esq.	1	1	0
*a*Mrs. Barrington Mills	1	1	0
*a*F. Wilbraham, Esq.	1	1	0
*a*W. Bliss, Esq.	1	1	0
*a*Rev. H. B. Burney	1	1	0
Rev. F. G. Burnaby	2	0	0
Rev. W. J. Clarkson	0	5	0
Per. W. Carpenter, Esq.	0	8	0
*a*Rev. John Stoughton, D.D.	1	1	0
Rev. C. D. Marston	5	0	0
*a*Miss Mayow	1	0	0
Rev. W. De Foe Baker	1	0	0
Island of Arran	0	1	0
*a*Rev. John Winter	0	10	6
Per G. R. Taylor	0	6	6
Rev. W. A. Plumptre	0	10	6
*a*Messrs. Cassell, Petter, & Galpin	2	2	0
*a*Rev. W. H. Bathurst	2	2	0
Rev. C. Mayall (2nd, per)	0	13	0
W. H. Bellamy, Esq.	3	0	0
*a*General Ashburnham	5	0	0
John Pryor, Esq.	0	10	0
*a*J. W. Froude, Esq.	1	1	0
W. H. Bennett, Esq.	1	0	0
Per Miss Binyon	0	9	0

	£	s.	d.
"A Lady Friend at Brighton"	1	0	0
a Messrs. Thorp Brothers	1	1	0
Mrs. Isaacs	0	5	0
a C. Lambert, Esq.	0	10	0
a Rev. James Davis	1	1	0
a G. Ashworth, Esq.	1	1	0
a Rev. Henry West	1	0	0
J. J. Stevenson, Esq.	2	2	0
a Rev. H. K. Richardson	1	1	0
a "A Friend," per Mrs. Hancock	1	1	0
a Rev. W. Guise Tucker	0	10	6
a Col. Robertson	1	0	0
a Rev. D. Anderson	1	1	0
Anon., per do.	0	15	0
a Miss Martin	1	1	0
a Thos. Ward, Esq.	1	1	0
Per B. J. Baldwin, Esq.	0	5	6
a Miss Douglas	1	0	0
a T. F. Pells, Esq.	0	10	6
Per Chas. Bolton, Esq.	1	5	0
a G. W. James, Esq.	1	1	0
a F. George, Esq.	0	10	6
a H. S. Goodchild, Esq.	1	1	0
a B. A. Lyon, Esq.	1	1	0
Miss Esther Jones	0	1	0
a J. E. Matheson, Esq.	2	2	0
a Rev. R. E. Bartlett	0	10	0
a H. Richards, Esq.	1	1	0
a A. O. Van Lennep, Esq.	1	0	0
a J. H. Powell, Esq.	0	10	0
Mrs. F. H. Leaf	1	1	0
Mrs. Mylow	0	10	0
Townsend Mylow, Esq.	0	10	0
G. E. Eyre, Esq.	5	0	0
W. Spottiswoode, Esq.	5	0	0
Miss Owens	1	0	0
Grand Lodge of Iowa	2	0	0
a S. Lloyd, Esq.	10	0	0
Edward Cunnington, Esq. (£2 2s. a)	3	3	0
a Miss Glossop	0	5	0
a W. Morley, Esq.	2	2	0
Per W. Leaf, Esq.	2	10	0
a James Bateman, Esq., F.R.S.	5	0	0
a S. Scott, Esq.	1	1	0
a Professor Donaldson	1	1	0
Miss Chambers (£1 1s. a)	2	1	0
Miss Spooner	0	2	6
a Rev. Adam Clarke Smith	0	10	0
a Captain G. Black	0	10	6
a Rev. Thompson Phillips	0	10	6
a W. Macnamara, Esq.	0	5	0
a Rev. G. Gould	1	1	0
a C. Frazer, Esq.	1	1	0
a J. G. Howlett, Esq.	1	1	0
a F. Harmer, Esq.	1	1	0
a W. P. Jarrold, Esq.	1	1	0
a Thomas Jarrold, Esq.	1	1	0
a Mrs. Huish	1	0	0
Per Miss Wilson	1	1	2
a T. Simson, Esq.	1	0	0
Bishop of Sydney	2	2	0
Captain Kay	2	0	0
Colin Smith, Esq.	0	2	6
Albert Smith, Esq.	0	2	6
Miss Debenham	10	0	0

BRITISH NORTH AMERICA.

I. Nova Scotia.

Per Captain Moody—			
a Bishop of Nova Scotia	1	1	0
Lieut.-Gen. Sir Hastings Doyle	1	0	0
T. Matthew Jones, Esq.	0	8	0
a P. Carteret Hill, Esq.	1	0	0
Very Rev. Dean Bullock	0	7	6
Rev. J. C. Edghill	0	10	6
Rev. W. H. Bullock	0	10	6
Hon. A. Keith, Grand Master of Provincial Lodge	1	0	0
Hon. Mr. Justice Bliss	1	0	0
Lieut.-Col. Baynes	0	10	0
Hon. Mr. Justice Wilkins	1	0	0
a Brereton H. Collins, Esq.	1	4	0
H. Nepean Clark, Esq.	2	0	0
a Rev. E. B. Nicholls	1	0	0

II. New Brunswick.

Per Captain Moody—			
Bishop of Fredericton	2	0	0
Mrs. Neville Parker	0	4	0
Miss Parker	0	4	0
Rev. H. Tippet	0	4	0

III. Cape Breton.

Per Henry Poole, Esq.—	Dollars.
J. E. Hill, Esq.	1.00
Judge Dodd	2.50
J. W. Johnstone, Esq.	0.50
T. C. Hill, Esq.	0.50
— Dodd, Esq.	0.50
J. W. Jennings, Esq.	0.50
D. M'Donald, Esq.	1.00
R. J. Uniacke, Esq.	1.00
Hugh M'Leod, Esq.	0.50
N. L. Mackay, Esq.	0.50
Miss Campbell	0.25
Mrs. A. Bowen	0.50
Mrs. Kirkwood	0.50
Rev. M. Crouch	1.00

LOCAL ASSOCIATIONS.

Bath.

Hon. Sec.—Rev. T. P. Methuen.	£	s.	d.
Rev. C. R. Davy	5	0	0

	£	s.	d.
J. W. Morris, Esq.	0	5	0
J. R. Bedwell, Esq.	0	5	0
Miss Dyke	0	5	0
Mrs. Stainforth	1	0	0
Rev. C. Kemble	0	10	0
Captain Anderdon	1	0	0
Mrs. Mount	1	0	0
Rev. W. Sargent	1	1	0
Rev. W. S. Shaw	0	5	0
Collection	8	8	8½
Rev. J. F. Moor	0	10	0
Mrs. Churton	1	0	0
Rev. J. Olive	1	0	0
Miss H. Armitage	0	5	0
Rev. J. Lawes	0	10	0
Rev. J. Bond	0	10	0
Mr. J. Johnston	0	10	0
Rev. R. Drummond	0	5	0
Rev. J. Macnaught	0	5	0
R. Stothert, Esq.	0	10	0
Mrs. Ainslie	0	5	0
Rev. J. Buttenshaw	0	5	0
Mrs. Buttenshaw	0	5	0
Rev. J. Earle	0	5	0

Bedford.

Hon. Sec.—Edwin Ransom, Esq.

The following names were incorrectly given in the last list:
Rev. C. C. Beaty-Pownall.
J. N. Foster, Esq.
Joseph Tucker, Esq.

The following are new Subscribers:

John Usher, Esq.	0	10	0
William Ransom, Esq.	1	1	0
Rev. John Brown	0	10	6
John Harvey, Esq.	1	0	0
Lt.-Col. Stuart	1	1	0
Rev. J. W. Haddock	0	10	6
Miss Thompson	0	10	6

Birkenhead.

Hon. Sec.—Ed. Rae, Esq.

aRev. T. E. Espin	1	1	0
C. Clark, Esq	1	1	0

Brighton.

Hon. Sec.—Rev. Dan. Winham.

Mrs. D. S. Dykes (2nd Don.)	5	5	0
"A Lady Friend at Brighton"	1	1	0
Per Rev. Dan. Winham	8	7	0

(Names will be given subsequently).

Bury, Lancashire.

Hon. Sec.—Rev. E. J. Hornby.

The following names were to be added or altered in the list of the subscribers which appeared in page 152 of *Quarterly* IV.:

George White, Esq.	1	1	0
Captain J. J. Mellor	1	1	0
Rev. H. Butcher	0	10	6

Cheltenham.

Hon. Sec.—Edward Wilson, Esq., M.D.

Per D. W. Nash, Esq., *Hon. Treasurer*	25	0	0

Cardiff.

Hon. Sec.—J. C. Oliver, Esq.

Euston Gibbs, Esq.	1	1	0
Lewis Williams, Esq.	1	1	0
Per J. C. Oliver, Esq.	1	10	6
John Cory, Esq.	2	2	0
R. Cory, Esq.	1	1	0
John Fry, Esq.	1	1	0
James Ware, Esq.	1	1	0
John Holst, Esq.	1	1	0
G. S. Stowe, Esq.	1	1	0
Messrs. Nixon, Taylor, and Cory	1	1	0
T. A. Richards, Esq.	1	1	0
W. Taylor, Esq., M.D.	1	1	0
J. C. Oliver, Esq.	0	10	6
Jas. Ward, Esq.	1	1	0
Rhys Jones, Esq.	1	1	0
J. F. Barry, Esq.	1	1	0
Collected by Dr. Fiddian	1	1	0
Do., Miss Hopkins	1	1	0

Chislehurst.

Hon. Sec.—Rev. F. H. Murray.

G. B. Wollaston, Esq.	1	0	0
T. Charington, Esq.	0	10	0
aRev. F. H. Murray	1	0	0
W. R. Winch, Esq.	10	10	0

Clifton.

Hon. Sec.—Rev. C. H. Wallace.

Proceeds of Lecture by Rev. F. H. Scrivener	11	0	
Miss Russell	1	1	

	£	s.	d.
Mrs. Cornish	1	0	0
Rev. J. H. Crofts	0	10	6
Mrs. Gorham	0	10	6
J. F. Hore, Esq.	1	1	0
*a*S. Dermot Thomas, Esq.	0	10	0
Miss Moor	1	1	0
W. F. Lavington, Esq.	1	1	0
Rev. W. F. Holson	0	5	0
*a*Rev. C. H. Wallace	1	0	0

DOVER.

Hon. Sec.—W. P. Mummery, Esq.

*a*K. Murchison, Esq.	1	1	0
*a*Ed. Knocker, Esq.	1	1	0
Rev. J. Bampton	0	10	0
*a*A. Birmingham, Esq	0	10	6
*a*Col. Powell	0	5	0
*a*Mr. Charles Spice	0	10	6
*a*W. Elsted, Esq.	1	1	0
*a*Rev. W. E. Light	0	10	6
*a*W. P. Mummery, Esq.	0	10	6

DARLINGTON.

Chairman.—

Restoration Lodge, No. III., of Ancient and Accepted Masons. Proceeds of Lecture delivered by Rev. H. B. Tristram	20	11	6

DEVIZES.

Hon. Sec.—Rev. W. P. S. Bingham.

*a*W. Butcher, Esq.	0	5	0
*a*W. Cunnington, Esq.	0	10	0
*a*Rev. A. C. Smith	0	5	0
*a*Rev. W. P. S. Bingham	0	5	0

EDINBURGH.

Hon. Sec.—A. Keith Johnston Esq., LL.D.

Amount remitted, £100.

Messrs. Younger and Co.	0	10	0
John Millar, Esq.	2	2	0
J. Nelson and Son	2	2	0
Miss Kerr	0	10	0
J. A. Jamieson, Esq.	0	10	0
G. Ramsay, Esq.	0	10	0
F. Anderson, Esq.	0	10	0
Mrs. Maitland	0	10	0
Mrs. E. Baxter	0	10	6
Rev. A. H. Chinnery	0	10	6
John Chalmers, Esq.	0	10	0
Rev. J. MacGregor	0	10	0
Messrs. A. Campbell and Co.	1	0	0
Rev. G. D. Cullen	1	0	0
J. and F. Wilson, Esqs.	0	10	0
Miss Rosa Douglas	0	10	6
W. Leckie, Esq.	1	0	0
Miss Muir	1	0	0
H. L. Norris, Esq.	0	10	0

FALMOUTH AND CORNWALL.

Hon. Sec.—A. Lloyd Fox, Esq.

Rev. J. H. P. Bannett	0	5	0
Rev. G. L. Church	0	10	6
Rev. G. Edgcome	0	10	0
Rev. G. Hext	0	10	0
Rev. G. Hill	0	2	6
Rev. R. Martin	1	0	0
Rev. W. Rogers	1	1	0
Mrs. R. S. Bolitho	1	1	0
Edmund Carlyon, Esq.	2	2	0
E. T. Carlyon, Esq.	0	10	6
Thomas Coode, Esq.	0	10	6
W. Duncalf, Esq.	0	5	0
J. S. Enys, Esq.	1	1	0
Miss Enys	0	10	0
John Freeman, Esq.	1	1	0
R. W. Fox	1	1	0
Samuel Fox	1	1	0
Robert Fox	1	1	0
Charles Fox	1	1	0
A. L. Fox	1	1	0
Mrs. Hicks	0	10	0
Mrs. Hoage	0	10	0
John St. Aubyn, Esq., M.P.	1	1	0
P. P. Smith, Esq.	1	1	0
Col. Tremayne	1	1	0
F. Truscott, Esq., B.A.	0	5	0

GUILDFORD.

Hon. Sec.—Col. Thurburn.

Proceeds of Lecture by Captain Palmer	3	4	0

HALIFAX.

Hon. Sec.—Rev. Dr. Bedford Hall.

Collected after Lecture by Rev. J. W. Bardsley	2	4	6
*a*Archdeacon Musgrave	1	1	0
*a*Sir Titus Salt (for five years)	2	2	0
*a*Col. Akroyd, M.P.	1	1	0
*a*J. Waterhouse, Esq.	1	1	0
*a*Miss Edward	1	1	0
Rev. J. Hope	1	1	0
*a*T. Purlay, Esq.	1	1	0
*a*J. Dodgson, Esq.	1	1	0
*a*Rev. A. L. W. Bean	1	1	0
*a*W. H. Rawson, Esq.	1	1	0

	£	s.	d.
*a*Mrs. W. H. Rawson	1	0	0
R. Hartley, Esq.	1	0	0
Mrs. Ramsden	0	10	6
Mr. Cash	0	10	6
*a*Mr. G. Wheelwright	0	10	6
Rev. W. E. Chapman	0	10	0
*a*E. Crossley, Esq.	1	0	0
Mrs. Souter	0	10	0
Mr. Whitby	0	5	0
Lecture at Sowerby by Rev. J. W. Bardsley	2	9	4
Per Miss Rawson	1	5	0

Ipswich.

Hon. Sec.—Rev. J. R. Turnock.

Anon., per Rev. J. R. Turnock	2	2	0
*a*The Archdeacon of Suffolk	1	1	0
*a*Edward Grimwade, Esq.	1	0	0
*a*G. C. E. Bacon, Esq.	1	0	0
*a*J. C. Cobbold, Esq.	1	0	0
*a*W. Brown, Esq.	1	1	0
*a*Rev. Joseph Hammond	1	1	0
*a*Sterling Westhorp, Esq.	0	10	6
Mrs. Sladen Smith	0	10	0

Leeds.

Hon. Sec.—Ed. Atkinson, Esq.

Alex. Ritchie, Esq.	1	0	0
T. Scattergood, Esq.	0	5	0
Mrs. Birchall	2	2	0
*a*W. J. Armitage, Esq.	2	2	0
*a*Rev. A. Atkinson	1	0	0
*a*Ed. Atkinson, Esq., F.L.S.	1	1	0
J. W. Atkinson, Esq.	0	10	0
*a*Edward Birchall, Esq.	1	1	0
*a*Miss Birchall	1	1	0
*a*Rev. Sir T. E. W. Blomefield, Bart. (£1 1s. *a*)	2	2	0
*a*Miss C. Charlesworth	1	1	0
*a*Miss F. Charlesworth	1	1	0
*a*Rev. Eustace R. Conder	1	1	0
*a*Rev. T. Dunn	0	10	6
Sir Andrew Fairbairn	5	0	0
W. Ferguson, Esq.	0	10	6
*a*Rev. John Gott	2	2	0
*a*Miss Harris	1	1	0
*a*Miss Heaton	1	0	0
*a*William Hay, Esq. (£1 1s. *a*)	6	1	0
John Holmes, Esq.	0	10	0
*a*G. Metcalfe, Esq.	1	1	0
John Rhodes, Esq.	5	0	0
*a*Miss Roberts	1	0	0
*a*Chas. Ryder, Esq.	1	1	0
*a*Rev. Henry Temple	0	10	6
Miss Tripp	0	10	0
*a*Rev. T. Whitby	1	1	0
*a*Thos. Wilson, Esq.	1	1	0
*a*Rev. Canon Woodford, D.D.	1	1	0
J. Dodgshun, Esq.	1	0	0

Liverpool.

Hon. Sec.—Rev. C. D. Ginsburg.

	£	s.	d.
Proceeds of Lecture at St. Augustine's by Rev. J. W. Bardsley	0	11	3
*a*Halsall Segar, Esq.	1	1	0
*a*H. Segar, Esq., jun.	1	1	6
*a*W. Madley, Esq.	1	0	0
*a*Rev. Dr. Ginsburg	1	1	0

Mansfield.

Hon. Sec. –T. W. Clarke, Esq.

Mrs. Melfit	1	1	0
Miss Anderson	0	5	0

Newcastle.

Hon. Sec.—Thos. Hodgkin, Esq.

*a*Literary and Philosophical Society	3	3	0

Nottingham.

Hon. Sec.—Rev. F. Morse.

*a*W. Windley, Esq.	2		0

Plymouth.

Hon. Sec.—J. Shelley, Esq.

H. B. Woodhouse, Esq.	1	1	0
*a*Rev. Franklin Bellamy	1	0	0

Scarborough.

Hon. Sec.—Rev. Dr. Evans.

Lecture, May 9, collected at doors	7	16	1½
*a*Rev. R. F. L. Blunt	0	10	0
*a*Rev. A. S. Aglen	0	10	0
*a*Rev. J. Bedford	0	10	6
*a*C. J. Peacock, Esq.	1	1	0
R. Foster, Esq.	0	10	6
*a*John Rowntree, Esq.	0	10	6
*a*Hodgson Smith, Esq.	0	5	0
*a*W. M. Wright, Esq. (for five years)	0	5	0
*a*John Colby, Esq.	0	2	6
M. C. Thackeray, Esq.			
*a*G. Bacon, Esq.	0	10	0

Southborough.

Hon. Sec.—Colonel Hebbert.

Mrs. Pierce Butler	0	10	0
Miss Hebbert	0	10	0

	£	s.	d.
Rev. S. H. Langston	0	2	6
Miss Herschel	0	2	6
Mrs. Wheeler	0	2	6
Mrs. E. Ralph Coke	0	2	6

SOUTH KENSINGTON.

Collection at Meeting of June 25th	9	15	5
*a*James Bateman, Esq., F.R.S.	5	0	0
*a*Rev. C. Bannatyne.....	1	0	0
*a*E. S. Dowling, Esq.	1	0	0
T. Edwardes Moss	5	0	0
*a*Lord Lawrence.....	5	0	0
*a*J. Robison Wright, Esq.	5	0	0

TAVISTOCK.

Hon. Sec.—Rev. D. P. Alford.

Per Rev. D. P. Alford	1	5	9
Miss Helen Edgell.....	0	10	6

TIVERTON.

Hon. Sec.—Major Stehelin.

The following names were incorrectly given in *Quarterly* No. V. :			
*a*H. Gill, Esq.	0	5	0
*a*G. R. Cock, Esq.	0	5	0
*a*H. Stokes, Esq.	0	10	0
*a*Rev. Robert Duckworth.....	1	1	0

WELLS.

Hon. Sec.—W. S. Welsh, Esq.

*a*R. N. How, Esq.....	0	10	0
*a*G. Lawrence, Esq.	0	5	0
*a*C. W. Lavington, Esq.	0	5	0
*a*W. Dore, Esq.....	0	2	6
*a*G. Thorn, Esq.....	0	5	0
*a*J. D. Sherston, Esq.	0	10	0
*a*Dr. Pope	0	5	0
*a*Dr. Edwards	0	2	6
*a*Mr. Kelway	0	5	0
*a*E. H. Elton, Esq.	0	5	0
*a*Rev. F. S. B. Peppin.....	0	5	0
*a*Rev. G. H. Fagan	0	5	0
E. C. Tudway, Esq.	1	0	0
J. Giles, Esq.	0	5	0
E. Charleton, Esq.	0	10	0

WINDSOR.

Hon. Sec.—Rev. H. Courtenay Hawtrey.

H.R.H. Princess Louise.....	10	10	0
Proceeds of Meeting, less all Expenses	18	9	0

ERRATUM.

For E. James Pocock, Esq., read *C. Innes Pocock, Esq.*

LIST OF LECTURES AND MEETINGS

Held for the Fund between March 18th and June 24th.

MEETINGS.

ANNUAL MEETING OF THE FUND, held on May 14th, at the Royal Institution. The Archbishop of York in the Chair.

OXFORD. May 27. The Vice-Chancellor in the Chair.

SOIRÉE at the house of W. Leaf, Esq., Streatham.

	£	s.	d.
Subscribed and promised	40	4	0
MEETING at the Vestry Hall, South Kensington, Saturday, June 24th. Chairman: Lord Lawrence.			
Collection in the Hall	29	15	5
*a*Lord Lawrence	5	0	0
*a*James Bateman, Esq., F.R.S.	5	0	0
*a*Rev. C. Bannatyne	1	10	0
*a*E. S. Dowling, Esq.	1	0	0
*a*J. Robison Wright, Esq.	5	0	0
T. Edwardes Moss, Esq.	5	0	0
Rev. T. M. Gorman's list—			
Robert Hampton, Esq.	5	0	0
W. Banting, Esq.	2	2	0
John Sperling, Esq.	2	2	0
*a*J. J. Merriman, Esq.	1	1	0
Rev. T. M. Gorman	2	2	0

LECTURES.

*** In this list the gross receipts only are given, except in a few cases, where expenses were first deducted.

		£	s.	d.
By the Rev. G. St. Clair—				
March 22.	Luton	4	17	1½
,, 28.	Lowestoft	6	16	1½
,, 30.	Chelmsford...	5	17	2½
April 1.	Notting Hill	3	3	7½
,, 5.	Erith	2	3	2
,, 11.	Tolmer Square	3	9	1
,, 12.	East End, Finchley	2	11	1½
,, 13.	Enfield	4	11	7½
,, 14.	Upper Holloway	4	17	11¾
,, 20.	Highgate	2	17	0
,, 21.	Clapham	10	17	4
May 2.	Lynn	1	11	10
,, 3.	Bedford	4	10	2½
,, 4.	Lincoln	6	15	6
,, 5.	Leeds	2	16	6
,, 6.	,, ...	4	14	2
,, 9.	Scarborough	9	6	7½
	,, subsequently paid	2	14	6
,, 11.	Whitby	7	18	8
,, 12.	Malton	4	9	10
,, 16.	Romford	2	1	0
,, 18.	Norwich	17	11	1
,, 19.	Yarmouth	11	19	1

		£	s.	d.
By the Rev. Henry Geary—				
March 21.	Bromley	13	1	8
,, 22.	Bedford	9	7	10
,, 24.	Deal	7	18	7
,, 25.	Eyre Arms, St. John's Wood	11	18	2
,, 28.	Buckhurst Hill	11	16	0
,, 29.	Chislehurst...	21	11	1
,, 30.	Chichester	7	12	5
,, 31.	Southampton	4	7	0
April 1.	Droxford	8	17	10
,, 4.	Surbiton	3	17	1
,, 5.	All Saints', Dalston	3	4	7
,, 7.	Westbourne Park	8	11	1
,, 8.	Fulham	4	8	5
May 31.	North Audley Street	10	3	1½

By the Rev. F. H. Scrivener—

Lectures have been given in Bath, Clifton, Teignmouth, Stonehouse, Dawlish, Torquay, and Wellington College.

PUBLICATIONS OF THE SOCIETY.

1. **Report of Preliminary Meeting, 1865.**
2. **Captain Wilson's Expedition, 1866.**
3. **Meeting at Cambridge, 1867.**
4. Annual Meeting, with Lieut. Warren's Report, 1868.
5. **Statement of Progress, January 1st, 1869.**
6. Lieut. Warren's Letters and Reports, with lithographed plans.
7. Lieut. Warren's Notes on the Valley of the Jordan and Excavations at Ain es Sultan (Jericho).
8. Dean Stanley's Sermon on the Exploration of Palestine. Price 6d.
9. **Quarterly Statement. No. I. April 1st, 1869.**
10. Quarterly Statement. No. II. June 24th, 1869.
11. Quarterly Statement. No. III. September 30th, 1869.
12. Quarterly Statement. No. IV. January 1st, 1870.
13. **Quarterly Statement. No. V. April 1, 1870.**

    Contents: Statement of Progress—The Moabite Stone, with an Illustration—The Temples of Cœle-Syria, with two Illustrations, by Captain Warren—The Summit of Hermon, with an Illustration, by Captain Warren—Our Summer in Lebanon, with an Itinerary, by Captain Warren—The Rock Tombs of El Medyeh, by Dr. Sandreczky—The Stone of Zoheleth, by M. Clermont-Ganneau—Letters from Mr. E. H. Palmer, Nos. I. and II.—Arabic Glossary—Captain Warren's continued Letters.

14. Quarterly Statement. No. VI. June 30, 1870.

    Contents: Statement of Progress—The Original Discovery of the Moabite Stone—The Expedition to East of Jordan, by Captain Warren—Heights of Places to East of Jordan, by Captain Warren—Letters from Mr. E. H. Palmer, Nos. III. and IV.—Inscriptions and Masons' Marks, by Captain Warren—Note on the Pool of Bethesda—List of Weights, &c., by Captain Warren—Report of Annual Meeting of May 16th—Captain Warren's continued Letters, No. 47.

All the Quarterly Statements except No. V. are now out of print.

LOCAL ASSOCIATIONS.

ALDERSHOT: *Hon. Sec.*—Rev. J. E. Sabin.
ALEXANDRIA—DUMBARTON: *Hon. Sec.*—Rev. D. Wright.
ALNWICK: *Hon. Sec.*—Edward Allen, Esq.
ASHFORD: *Hon. Sec.*—F. A. Dewé, Esq.
BASINGSTOKE: *Hon. Sec.*—Rev. W. Marriner.
BATH: *Hon. Sec.*—Rev. T. P. Methuen.
BEDFORD: *Hon. Sec.*—E. W. Ransom, Esq.
BIRKENHEAD: *Hon. Sec.*—Ed. Rae, Esq.
BIRMINGHAM: *Hon. Sec.*—Rev. Charles Evans.
BRADFORD: *Hon. Sec.*—Rev. W. Dyson.
BRIGHTON: *Hon. Sec.*—Rev. D. Winham.
BROADSTAIRS: *Hon. Sec.*—Rev. J. H. Carr.
BURNLEY: *Hon. Sec.*—Rev. H. Stamer.
BURY: *Hon. Sec.*—Rev. J. Hornby.
CALLINGTON: *Hon. Sec.*—Rev. F. V. Thornton.
CAMBRIDGE: *Hon. Sec.*—Rev. T. G. Bonney, Tutor of St. John's College.
CARDIFF: *Hon. Sec.*—J. C. Oliver, Esq.
CHELTENHAM: *Hon. Sec.*—Dr. E. Wilson.
CHESTER: *Hon. Sec.*—The Very Rev. the Dean of Chester.
CHICAGO, U.S.A.: *Hon. Sec.*—Rev. Dr. Patton.
CHIGWELL: *Hon. Sec.*—Rev. H. M. Robinson.
CLAPHAM: *Hon. Sec.*—Rev. R. B. Girdlestone, St. James's, Clapham Park Road, S.W.
CLIFTON and BRISTOL: *Hon. Sec.*—Rev. C. H. Wallace.
CROYDON: *Hon. Sec.*—Mr. Warren.
DALKEITH: *Hon. Sec.*—W. Bryce, Esq., M.D.
DARLINGTON: *Hon. Sec.*—
DEVIZES: *Hon. Sec.*—Rev. W. P. S. Bingham.
DEVONPORT: *Hon. Secs.*—Rev. H. Everett, J. Venning, Esq.
DORCHESTER: *Hon. Sec.*—Rev. Handley Moule.
DOVER: *Hon. Sec.*—Mr. W. P. Mummery.
DUNDEE: *Hon. Sec.*—R. Mackenzie, Esq.
DURHAM: *Hon. Sec.*—Rev. J. Dodd.
EASTBOURNE: *Hon. Sec.*—Rev. H. R. Whelpton.
EDINBURGH: *Hon. Secs.*—Rev. W. Lindsay Alexander, D.D., and A. Keith Johnston, Esq., LL.D.
ESHER: *Hon. Sec.*—R. Few, Esq., Wolsey Grange.
EXETER: *Hon. Sec.*—Rev. Prebendary Acland.
FALMOUTH, for the County of Cornwall: *Hon. Secs.*—A. Lloyd Fox, Esq., and W. P. Dymond, Esq.
FARNHAM: *Hon. Sec.*—Rev. E. Utterton.
FAVERSHAM: *Hon. Sec.*—
FROME: *Hon. Sec.*—Rev. T. G. Rooke.
FOLKESTONE: *Hon. Sec.*—Rev. J. W. Watson.
GLASGOW: *Hon. Sec.*—A. B. M'Grigor, Esq.
GLOUCESTER: *Hon. Secs.*—Rev. J. Bowman and F. Cooke, Esq.
GREENOCK: *Hon. Sec.*—D. MacDonald, Esq.
GUILDFORD: *Hon. Sec.*—Col. Thurburn.

HALIFAX: *Hon. Sec.*—Rev. Dr. Hall.
HAVANT: *Hon. Sec.*—Rev. F. P. Seymour.
HERTFORD: *Hon. Sec.*—Rev. T. Lingley.
HUNTINGDON: Rev. Gerald Vesey.
JEDBURGH: *Hon. Sec.*—G. Fyfe, Esq.
KETTERING: *Hon. Sec.*—Rev. H. Jackson.
LEEDS: *Hon. Sec.*—Edward Atkinson, Esq.
LEWES: *Hon. Sec.*—Rev. R. Straffen.
LIVERPOOL: *Hon. Sec.*—Rev. C. D. Ginsburg.
MALVERN: *Hon. Sec.*—Rev. D. F. A. Grahame.
MANCHESTER: *Hon. Sec.*—Rev. W. Crane.
MANSFIELD: *Hon. Sec.*—T. W. Clarke, Esq.
MARGATE: *Hon. Sec.*—Rev. G. Collis.
MIDDLESBOROUGH: *Hon. Sec.*—Rev. Vyvyan H. Moyle.
NEWARK: *Hon. Sec.*—Evelyn Falkner, Esq.
NEWBURY: *Hon. Sec. pro tem.*—Rev. J. L. Randal.
NEWCASTLE: *Hon. Sec.*—Thomas Hodgkin, Esq.
NOTTINGHAM: *Hon. Sec. pro tem.*—Rev. F. Morse.
OLNEY and NEWPORT PAGNELL: *Hon. Sec.*—Rev. J. P. Langley.
OXFORD: *Hon. Secs.*—Rev. Professor Rawlinson and Rev. Edwin Hatch.
PERTH: *Hon. Sec.*—R. Jameson, Esq.
PLYMOUTH: *Hon. Secs.*—J. B. Rowe, Esq., and J. Shelley, Esq.
PORTSMOUTH: *Hon. Sec.*—Rev. N. R. Devereux.
RAMSGATE: *Hon. Sec.*—Mr. Wilson, High Street.
REIGATE and REDHILL: *Hon. Sec.*—W. Wilson Saunders, Esq.
RICHMOND: *Hon. Sec.*—R. R. Alexander, Esq.
RYDE: *Hon. Sec.*—Rev. J. Le Mesurier (Bembridge).
SCARBOROUGH: *Hon. Sec. pro tem.*—Rev. B. Evans, D.D.
SHERBORNE: *Hon. Sec.*—J. Farmer, Esq.
SOWERBY: *Hon. Sec.*—Rev. A. L. W. Bean.
ST. ALBANS: *Hon. Sec.*—Rev. W. J. Lawrance.
ST. ANDREW'S: *Hon. Secs.*—Dr. Lees and Dr. Mitchell.
ST. GERMANS: *Hon. Sec.*—R. Kerswill, Esq.
ST. LEONARDS:—Mrs. Alexander, Brunswick House, Marina, has kindly consented to receive subscriptions.
STIRLING: *Hon. Sec.*—Rev. W. Taylor.
STREATHAM: *Hon. Sec.*—Rev. W. Raven.
TAUNTON: *Hon. Sec.*—Rev. D. Alford.
TAVISTOCK: *Hon. Sec.*—Mr. Frederick Clarke.
TIVERTON: *Hon. Sec.*—Major Steheln.
TUNBRIDGE: *Hon. Sec.*—Rev. J. W. Bromley.
TUNBRIDGE WELLS: *Hon. Sec.*—Rev. W. Weston Elwes.
UXBRIDGE: *Hon. Sec.*—J. Hunt, Esq., F.R.G.S.
VENTNOR: *Hon. Sec.*—Rev. A. L. B. Peile.
WARMINSTER: *Hon. Sec.*—J. Morgan, Esq.
WELLS: *Hon. Sec.*—Rev. G. Fagan.
WESTON-SUPER-MARE: *Hon. Secs.*—Capt. T. Townsend, R.E., and J. Titley, Esq.
WIMBLEDON: *Hon. Sec.*—Rev. T. Whitehead.
WORCESTER: *Hon. Sec.*—Rev. Francis J. Eld.

BIRKET ISRAIL
2325'
N.E. ANGLE
N.W. ANGLE
GATE OF THE INSPECTOR
GOLDEN GATE
THE PLATFORM
IRON GATE
H A R A M A S H S H Á R I F
THE NOBLE SANCTUARY
N
S

THE PLATFORM
WILSON'S ARCH
GATE OF THE CHAIN
THE MOORS OR THE PROPHET'S GATE
ROBINSON'S ARCH
SHAFTS
S.W. ANGLE
DOUBLE GATE
TRIPLE GATE
SINGLE GATE
S.E. ANGLE
OPHEL WALL
BAB AL MAGHÂRIBÈ
PLAN OF THE NOBLE SANCTUARY
SHEWING THE RESULTS OF THE RESEARCHES OF
Capt C.W.Wilson R.E. & Capt. C.Warren R.E.
100 50 0 100 200
Scale of English Feet

THE

PALESTINE EXPLORATION FUND.

STATEMENT OF PROGRESS.

The present *Quarterly* offers to subscribers of the Fund the promised plan of the Haram Area, showing the excavations as revised by Captain Warren. A few words of explanation will be found in another part of this number. It is hoped that the study of this plan will lead to a fuller comprehension of the nature and importance of the work already accomplished.

Mr. E. H. Palmer and Mr. Drake have just returned to England, after a journey of no ordinary danger, as well as interest. There has not been time for Mr. Palmer to prepare a report of the results of the expedition for this *Quarterly*, but a full account may be expected in the next. It may be remarked that Mr. Palmer and Mr. Drake have traversed a country previously almost wholly unknown—the scene of the Forty Years' Wandering, and, with no attendants or escort, but relying entirely on their own tact, and Mr. Palmer's knowledge of the language, worked their way round the south of the Dead Sea from Petra, through the country of Moab—perhaps the most lawless district of any about Palestine.

Captain Warren has been wholly occupied since his return to England in putting together his work for the Committee. A large portion of this will be published in the forthcoming book, the "Recovery of Jerusalem." With the help of abundant maps, plans, and illustrations, it will be found easy to follow his discoveries and estimate his work.

The plans of the Committee for the future have been, as was to be expected, interfered with by the European war. They propose at present to organise an expedition as soon as possible which shall

have for its object, in the first place, to explore thoroughly the wadies and ruins lying round the Sea of Galilee. Little has yet been done in this district, the most interesting, next to Jerusalem, of any in Palestine to the student of the New Testament. They will be guided, of course, by the amount of funds at their disposal.

Through the kindness of the authorities of the Department for Arts and Sciences, arrangements have been made for exhibiting some of the results of the Society's labours at the South Kensington Museum. When the room is open, due advertisement will be made.

Jerusalem, which is and always will continue to be, the central point of interest, will not be lost sight of. At present, Dr. Chaplin, now one of the Committee of the Fund, has charge of the works and stores, &c., left behind by Captain Warren. The discovery at the Convent of the Sisters of Sion narrated below carries on the previous work in the same place of Captain Wilson, who first discovered this curious passage, and Captain Warren, who first explored it.

Lectures will be delivered during the coming season, and friends of the Fund who wish to promote its interests and extend a knowledge of its work by having a Lecture in their neighbourhood, may communicate to that effect with the Secretary at the Society's office as early as possible.

THE HARAM AREA.

The Haram Area—or Noble Sanctuary, as Captain Warren translates it, on some part of which, as all are agreed, stood the Temples of Solomon, Zerubbabel, and Herod—is a large enclosure, in shape oblong, but somewhat irregular, its angles not being all exactly rectangular, nor its opposite sides exactly equal. Thus the south side is 922ft. long, the east 1,530ft., the west 1,601ft., and the north 1,042ft. The large space enclosed within its walls contains the celebrated Kubbet es Sakhra, or Dome of the Rock, certain mosques, small oratories, and green spaces. It contains also a large number of tanks, which have been examined and measured with the greatest care by Captain Wilson and Captain Warren. These will be found numbered on the plan. The Dome of the Rock is an octagonal domed building rising from a platform partly built, partly formed of the rock, and paved with stone slabs. It covers a large rough, unhewn rock rising a few feet above the pavement, containing a cave, in the centre of which is a marble slab said to cover the entrance to a passage called by the Mohammedans the "Well

of Souls." About this cave and the building which surmounts it controversy has been active; one party, at the head of whom may be mentioned the Rev. George Williams, author of "The Holy City," maintaining that the site is that of the altar of the Temple, and that the mosque is Saracenic, while another party thinks, with Mr. Fergusson, that the mosque is a Christian church—no other than Constantine's Church of the Anastasis, built over what Constantine believed to be the site of our Lord's Sepulchre. At the south-east angle are the so-called "Solomon's Stables," a series of vaults under the S.E. angle discovered some thirty years since, and now well known to most visitors to Jerusalem. They have been described by nearly all writers on the subject. A very curious passage, discovered by Captain Warren under the "Single Gate," led him, though he was obliged to leave the place without further exploration, to believe in the existence of other vaults and chambers beneath these.

Then gates exist in the south vale, called respectively the Single Gate, the Triple Gate, and the Double Gate. At or under each gate exist passages, which are marked in the plan. At the Double Gate exists the modern wall of the city. The buildings in the southern portion of the Area are the Mosques of Omar, of El Aksa, and of the Mogrebbin, Moroccans, or Moors.

The gates on the west side will be found on the plan in their English names. These are—

The Moors' or Prophets' Gate . . . Bâb al Maghâribé;
The Gate of the Chain . . . . . Bâb as Silsilé;
The Gate of the Bath . . . . . Bâb al Mathara;
The Iron Gate . . . . . Bâb al Hadid;
The Gate of the Inspector . . . . . Bâb an Nâzir;

with one or two others. These are all modern.

About 50ft. from the south-west angle is a projecting portion of an arch, called, from him who first pointed out that it must have belonged to an arch, "Robinson's Arch." Here, it will be remembered, occurred one of the most memorable of Captain Warren's discoveries. On the plan will be observed the course of the aqueduct, which he found running along the bottom of the wall, partly cut in the rock, partly constructed of masonry, and with one of its circular pools crossed by the Haram Wall, a circumstance from which we may fairly infer that the wall is of more recent date than the pool, *i.e.*, than the aqueduct. This aqueduct may have been built for the purpose of carrying off the stream of running water which Captain Warren found higher up the wall at Wilson's Arch.

The vaults and chambers found at Wilson's Arch, already fully described in Warren's reports and letters, were built apparently to sustain the causeway which doubtless crossed the valley at this point, and were probably used as granaries. We have thus two causeways, one at Robinson's Arch and one at Wilson's Arch, across the Tyropœon

Valley, which runs very nearly down the west wall, crossing it at the south-west corner.

The Hill of Ophel lies to the south of the Haram Area. A large number of excavations were made here, and many of them were attended with the happiest results. Among these, it is only necessary to call attention here to the discovery of the Ophel Wall.

At the south-east angle were found, on the lowest courses of stones, the characters and marks which have excited so much curiosity, and which were pronounced by Mr. Deutsch to be Phœnician. Further examination of the valley proved that the whole western bank of the Kedron Valley is buried in *débris*, in some places 60ft. to 80ft. deep, and the bed of the river has been shifted 90ft. to the east.

The "Golden Gate" is the only gate on the eastern side; this is now mainly taken up with tombs, a circumstance which renders it impossible to dig there. A shaft was, however, sunk, and though unfortunately it could not be prosecuted to the end, it led, as will be remembered, to results of great interest.

At the north-east angle were found other characters resembling those of the south-east. Here, too, was discovered a valley, the existence of which had been suspected before, running across the angle.

The contour lines represent the surface contours, and show the number of feet above the level of the Mediterranean. Another contour map has been prepared by Captain Warren, from which a model has been executed, showing the lie of the rock itself, or, pretty accurately, that of the ground before any building was placed upon it.*

The "Birket Israil" is the traditional Pool of Bethesda.

Reference need not be made here to Warren's letters, which are in the hands of all subscribers. The brief explanations given above, with the map, will prove, it is hoped, a sufficient help to their right understanding. The deepest shafts were at the three angles, that at the north-east being 120ft. before the rock was reached. Speaking roughly, at each of these angles, 100ft. of rubbish hides the wall from view, rubbish which has arisen on the eastern side wholly from *débris* produced by siege and destruction.

DISCOVERY AT THE N.W. ANGLE.

The Turkish authorities, in searching for water at Jerusalem, have made an important discovery at the north-west angle of the Haram Area, of which Dr. Chaplin has sent an account, together with a plan executed by Mr. Schick.

In the rock-cut passage, described Oct. 28, 1867 (Letters, p. 35), leading from the double tunnel under the Convent of the Sisters of Sion

* This model can be seen at the office of the Fund, and may be lent for exhibition at lectures and meetings.

to the Haram Enclosure, the rubbish has been cleared out, the bottom is found to be plastered, and the dam built across has a hole in it for stopping and letting out the water.

The extreme southern end of the passage, which was blocked up, has now been cleared out, and is found to turn sharply to east for a few feet, when it meets with a massive wall of bevelled or marginal drafted stones. This wall is 8ft. thick, and lies along the western boundary of the Haram Enclosure; three courses are rubble, the middle one is 4ft. 7½in. in height, the drafts are 7in. wide at top and bottom, and from 3in. to 4in. at the sides, and sunk about ½in.

The portion of the wall exposed is only a few feet south of the north-west angle of the Haram Area.

September 27, 1870. CHARLES WARREN, Capt. R.E.

(*Extract from Letter referred to.*)

"JERUSALEM, *October* 28, 1867.

"I have been unable to explore passage in west wall of the Souterrain at 'Sisters of Sion;' it is blocked up with masonry. I have, however, examined the hitherto unexplored passage cut in the rock at its southern end, and consider the results will be thought very interesting. Last week I looked into this passage, and found it to open out to a width of 4ft., and to be full of sewage 5ft. deep. I got some planks and made a perilous voyage on the sewage for about 12ft., and found myself in a magnificent passage cut in the rock 30ft. high, and covered by large stones laid across horizontally. Seeing how desirable it would be to trace out this passage, I obtained three old doors and went down there to-day with Sergeant Birtles; we laid them down on the surface of the sewage, and advanced along by lifting up the hindermost and throwing it in front of us. The general direction of the passage is due south; after 16ft. it runs to west for 6ft., and then pursues its original course. In some places the sewage was exceedingly moist and very offensive, and it was difficult to keep our balance whilst getting up the doors after they had sunk in the muck. After advancing 6ft. we came to a dam built across the passage—ashlar—about 10ft. high: the passage in continuation also containing sewage at the lower level of 6ft. Everything had become so slippery that we had to exercise great caution in lowering ourselves down, lest an unlucky false step might cause a header into the murky liquid. After leaving this dam behind us some 50ft. we found the sewage to be firmer at top, and after a few more feet we were enabled to walk on its surface with the aid of poles. The roof now began sloping down, so that the height was considerably lessened, and on arriving at a little more than 200ft. from the commencement we found our passage diminished to only 8ft. in height, and blocked up at the end by masonry. The sketch will show more clearly the exact position of this passage; it is cut throughout in solid rock from top to bottom, and thus we have a fair section of the contour from the Serai to the Via Dolorosa.

"It is evident that no ditch ever traversed the city across the line of this passage; and, therefore, the theory of a cutting from Birket Israil to the Street El Wad is untenable, unless it be supposed to have been more northerly in the direction of the arched Souterrain, whose direction, S.S.E., appears inconsistent with such an arrangement. I cannot for a moment think that this passage was originally intended as a drain; it may have been a natural cleft, utilised by cutting, and this would account for its great height, which in some places is full 36ft. above the surface of the sewage.

"Dr. Chaplin suggests that it is the passage, 'Strato's Tower,' mentioned by Josephus as leading to Antonia."

See also "Ordnance Survey of Jerusalem," pp. 45 and 85, and Plate xvii. 6.

PHŒNICIAN INSCRIPTION ON JAR HANDLES.

Some two years since there were sent to England, with the other objects found by Captain Warren in the shafts, certain jar handles, all of which were stamped with the same mark—apparently an eagle, rudely designed. They were found at the foot of the wall at the south-east angle. Captain Warren (Letters, p. 88, *Quarterly Statement* No. 1.) describes a "clay mould" from 8ft. to 10ft. in depth, resting on the soft rock at the bottom. This is cut away, apparently to allow the stones to be placed in their proper positions, Captain Warren drawing therefrom the inference that the clay mould is of older date than the wall. *On* this mould were found the jar handles referred to.

In preparing the illustrations for his paper in the forthcoming book, Captain Warren wished a woodcut to be made of the marks on these handles, and for that purpose cleaned one of them. On being brushed, certain letters before hidden by dust became clear and legible. These letters are in shape similar to those of the Moabite Stone.

The letters were not quite the same on the different handles, but they have been deciphered by Dr. Birch, of the British Museum, as follows:—

(1.) LeMeLeK. Ze PHa. Son of the king Zepha.
(2.) LeK SHaT King Shat.
(3.) LeK The following letters being uncertain.

Photographs have been taken of the handles, which can be seen at the office of the Fund. The originals are now—with the other objects found in the shafts—in the South Kensington Museum.

THE ROYAL CAVERNS OR QUARRIES, JERUSALEM.

BY WILLIAM SIMPSON, F.R.G.S.

THE existence of large excavations under such cities as Jerusalem, Rome, Paris, Constantinople, Kief, &c., has led to some curious theories. These ancient cities were not only capitals, but religious centres, and more or less regarded as sacred places. This identity of character naturally led to the conclusion that there must have been some similarity of purpose in these subterranean labyrinths. An extended knowledge of each of these places tends to destroy the supposition that there was any uniformity of idea in forming them. At Kief they are places of burial. The greater part of the Roman catacombs are the same. There are a few small chapels among these tombs, the chapels being tombs themselves. Some were undoubtedly Arenaria, from which the material for lime was taken. The pre-Christian date of any of them is a subject which is at present too fiercely debated to be assumed as a settled point. With the exception of the catacombs of St. Priscilla, where there is a choked-up line of an old aqueduct, evidently an accident among these underground ramifications, there is no appearance of any relation to a water-supply in the whole of the vast extent of these excavations. At Constantinople, on the contrary, "water-supply" is seemingly the only purpose. There is the *Bir-bin-derik*, or cistern of a thousand and one columns, and the *Yere-baton-serai*, or "subterranean palace," both of these being very fine specimens of architecture. The latter is all in beautiful marble and elaborate Corinthian. In both cases they are built, and the columns support the ground above. There is another very large underground reservoir at Constantinople, which is said to extend from under the Seraglio Sta. Sophia, the Atmedan, and as far as the tottering column, and much farther, according to some accounts, for there is a story that two men ventured upon this unknown sea in a boat and never were again heard of. There were nineteen cisterns originally in Constantinople for supply of water. Eleven of these are said still to be in existence.

Most of the excavations of Jerusalem seem to resemble those of Constantinople in their purpose, "water supply" being evident in their construction, the great Bahr-el-Khebir, excavated under the Haram, being evidently connected with the ample supply required by the Temple services. The same may be suggested in regard to all the smaller cisterns under the Haram, and they are very numerous, as may be seen in the large map at the office of the Palestine Exploration Fund. These are all in the solid rock, the only yet discovered exception being the underground built cistern at the north-east corner, and how far the others are natural, and how far excavated, it is now difficult to determine. These may have been caves originally, and they may have been extended as the wants for water increased, and passages of communication from the one to the other would be added,

the whole as it remains at present forming a most wonderful labyrinth of cisterns, grottoes, tunnels, stairs, &c., &c. The Sacred Cave under the Dome of the Rock is an exception: it has never been a well, no doubt, but it has been a natural cave, and it has been also increased, and its original form altered by excavations. The second cave underneath, called the Bir-Aruah, or "Well of Souls," has a long passage running north and south, connecting it with the cisterns of the Haram. The two tunnels under the Convent of the Sisters of Zion are partly cut in the rock and partly built, and their object has also apparently been the supply of water. The long rock-cut tunnel at En-Rogel, which Captain Warren has cleared out, at least to one of its extremities, must, although not yet clearly understood, have been designed for a part of the water system of ancient Jerusalem. There are also subterranean passages leading to the Fountain of the Virgin.

These are the principal subterranean places as yet discovered in Jerusalem, with the exception of the Royal Caverns or Quarries. And as the supply of water is evident in the one case, the supply of stone for building will be as clearly seen in the other.

The Damascus Gate is in the north wall, where it dips down into the upper portion of the Tyropœon Valley. Upon passing out, a part of the city wall is seen on the right hand, standing very high upon a mass of stratified and rugged rock, and it is only when you come close under this point that a very low entrance is discovered, so low that one has to stoop in passing in. Gradually the height increases, and before you have proceeded far the ground slopes downwards, and you find yourself in a very magnificent cave. At this point there is nothing to indicate that the place is other than a natural cave. The roof is formed by the stratification of the limestone rock, and fragments are scattered about on the ground. This portion may have been an original cave formed by nature, and it may have become a quarry when the building of the Temple, the palaces, or the walls of the city would require a large supply of stone, and its nearness would be a strong recommendation. After entering a little farther, the evidences of its having been a quarry soon begin to appear. This is seen in the straight-cut walls, the absence of stratification in the roof, in rude masses, more or less square, being left to give support as they quarried beyond. But above all, the character of a quarry is seen in the stones, more or less cut out, left as the work was going on. The process by which a block of stone was separated seems to have been by cutting a perpendicular line into the rock as far in as the breadth of the block was required. These cuttings, which are yet to be seen in many parts of the quarry, are about four or five inches wide, and would allow the use of a pick or instrument with a long handle, by which the incision could be carried on to the necessary depth. A similar cutting is necessary behind, and the same at the top and bottom, before the stone could be removed. This process, although it must have been slow, has the advantage of producing stone already squared. There is very satisfactory evidence left as to how they

arranged the means of light for this work. On the left-hand side of each cutting there is a very slight hollow formed at the corner, into which a small wick may have been placed and a little oil; the small cup-like hollow makes the theory of a wick and oil more probable than that it was for a candle, and the smoke has blackened the white limestone above, which still remains over each as a record of the past. The side of the cutting is also blackened, as well as the outer face, telling that when the workman advanced with his work and required the light to shine inwards that he must have turned the wick so that he might see to the back of the narrow incision. One cannot but admire the simplicity and ingenuity of such primitive means, for the space is so narrow, that there is no room beyond what is required for the movement of the pick, and a lamp would have been in the way. The illustration given with this article will assist in conveying a clearer idea of what is here described.

At one place our guide placed one of the candles on the ground at the edge of what seemed a precipice, and in a few minutes after we had gone on we found that we were in a lower level, for through an arch of solid rock we could look up and see the candle throwing a dim glimmer on the darkness around. This was what a theatrical manager would call in his bill "startling effects," and our guide seemed to pride himself upon it quite as much as if he belonged to the stage. Upon inquiring of him as to the real extent of these caverns, he spoke with a mysterious vagueness on the subject. "No one could tell," but it was believed "that they extended all under Jerusalem; he would take us as far as he knew, and he was the only guide in Jerusalem with whom it was safe to enter these places." Such was his account. And some caution is necessary in the selection of a guide to this labyrinth, for one friend has reported that his party went in with a person who pretended to be acquainted with the place, but had not a sufficient amount of candle, and they were left in the dark: the guide sat down and cried, and the party had to grope their way in the darkness, but they were lucky enough to scramble out. Upon inquiring of Captain Warren about the real extent of these caverns, his account was much less imaginative than that of our guide. The limits of the place were understood to have been all explored, but there might be other caverns of the same kind under Jerusalem. In fact, the existence of others is highly probable. The Royal Quarries are in some places as much as 100 yards wide, and may be said to extend from the entrance to about 200 yards or more in a south-easterly direction. They are on the eastern side of the Tyropœon valley, and under the high ground upon which stands that portion of Jerusalem known as Bezetha. They are supposed to extend south as far as the Austrian Consulate, and it will be noticed that they thus approach very near to the excavations under the Convent of the Sisters of Sion, the double tunnel at this last place extending to under the Haram Area; so that it may be said that the ground is nearly hollow all the way from the Temple enclosure to the Damascus

Gate. The popular idea is that a passage exists from these caverns to the Haram, and leading to the cave under the Dome of the Rock, but none of the authorities who have examined the place give any countenance to it. The following from a Mohammedan author will indicate what has been believed about these curious quarries. Mejir-ed-Din says: "Opposite to and to the south of the Zahara, and below the northern gate of the city [Damascus [Gate], is a great oblong excavation, called the Cotton Grotto; some say that it extends even below the Sakarah." The place was called by the Arabs, "Maghara el Cotton," or the "Cotton Grotto," and its existence seems not to have been altogether unknown, but it was only about fifteen years ago that it was explored, and described by Dr. Barclay. The following is a notice of it which appeared at the time:—"Those portions of the cut-away rock which lie exposed to the action of water, were coated over with a thick incrustation of stalactites, which showed the remoteness of the age of excavation; yet the marks of the chisel on the dry portions of the rock looked as new and fresh as if the workmen had only just retired. We proceeded onwards, encountering on our way only such objects as tended to heighten our curiosity and to excite inquiry, such as, Why and wherefore were deep niches cut here [these niches have been explained in this paper] and a flight of steps there? Or to what class do those animals belong over whose burrows we were stumbling? Or how or when had the human skeletons that lie on yonder ledge of rock been brought hither? All these gave way to an object of much greater interest, almost affecting. Within a retired solitary place, hidden from the gaze, stood a grey-looking circular basin of about three feet in diameter, scooped out of the solid rock, receiving in its bosom the water that was filtering through the sides and the ceiling above. Close to it lie scattered broken pieces of pottery, remains of vessels used for drinking, and which appeared as if they had only just dropped out of the hands of the buried workmen when coming hither to quench their thirst."

The well is still visible, and looks like a natural fissure in the rock. The water is brackish, but there are no skeletons visible nowadays, and there is no appearance of the usual ledges or cells cut in the rock to indicate that the place was intended for tombs. Bodies may have been placed in it at later times, or it is not impossible that people may have got in and lost themselves in such a large place.

It has been supposed that the entrance to the Royal Quarries was blocked up about 1542 A.D., when the present walls of Jerusalem were built by the Sultan Suleiman. Thrupp quotes the account of a Jewish traveller from Leghorn, who visited Jerusalem in 1523, and he says: "Not far from the Bâb el' Amud [or Damascus Gate] is the Cave of Zedekiah, which extends underground to the mountains of Jericho. Several persons told me that they themselves walked a mile in the same. It is so spacious that a man on horseback with a lance in his hand can walk through it quite comfortably." If this is not a sensa-

tional account by the guides of that period there is evidently a great field for discovery in the caverns at this locality. The entrance has been blocked up by a large accumulation of earth, which has, from its appearance, been perhaps blown in by the wind, and extends in the form of a bank for some distance into the interior. If this earth was removed down to the original surface of the rock, instead of having to duck down on entering, a man on horseback with a spear could easily pass. The rock has been cut deep down on the outside of the walls of the city at this point, and to the casual observer it looks like a portion of the fosse which is more or less cut out of the rock all the way round to nearly St. Stephen's Gate, but a closer inspection will show that the deep cutting between the Damascus Gate and the entrance to the cave is exceptional. There is a large square basin, with perfectly perpendicular sides, which at first one would suppose had been cut out as a tank for water; although partially filled up, it is yet more than twenty feet from the surface. This is only a part of the passage by which the road out of the caves to the Damascus Gate went along. The cutting through the rock from this square basin has been to some extent built up, suggesting that the mouth of the cave had been intentionally closed, which may have become necessary for various reasons, such as people losing themselves, or its being a haunt for robbers and such characters as Abu Gosh, who regularly levied black mail upon the pilgrims to the Holy City. There is the statement in 1 Kings vi. 7, that the stones for the temple were all squared and made ready, "so that there was neither hammer nor ax nor any tool of iron heard in the house, while it was in building," and the notion is associated with these caverns that they are the underground means by which these stones were moved in silence to their places. If such were the case, the communicating passage has yet to be discovered, and in such a city of caverns it may exist, but the deep fosse between the entrance to the quarries and the Damascus Gate is satisfactory evidence that the stones were moved by that route into the city to where they were required for building on ordinary occasions.

There is over the entrance to these quarries a high mass of rock upon which the city wall at this point is built; this rock is now rough and rugged, but the fact that it was cut so as to form a strong defence at this place is evident. As soon as the mind realises this aspect of the case the inquiry naturally occurs, Where is the other side of the cutting? The eye looks over the ground, and the counterscarp of the fosse becomes manifest in the cliff at the Grotto of Jeremiah, which is distant about 400ft. This grotto, although it now contains some tombs, is an old quarry, and may consequently be looked upon as almost a part of the Royal Quarries. But the excavated space between, was it all excavated for defence, or may it not owe its great width to its being also a quarry? This question is important as bearing on the defences of Jerusalem and the line of its ancient walls. If these quarries are of antique date—and the curious rock-cut passage for removing the blocks of stone

does give an air of antiquity to the spot—we have a valuable item in the consideration of one of the most difficult questions of Jerusalem topography. The high rocky point over the entrance to the Royal Caverns must always have been one of the keys, at least, of the defence of Jerusalem, the Temple being always the object of attack, and it was probably the position of one of the three towers described by Josephus. Antonia would be safe till the fortifications on this height fell. The likelihood is, that the stratagetic value of this strong spot may have caused the deep fosse to be cut into the solid rock; and afterwards, the proximity of the place to the town, and perhaps the quality of the rock, may have led to its becoming a quarry. The first object of the cuttings, that of defence, may have again directed the quarrying so as to give a still greater width to the fosse, and hence its extension to what is now called the Grotto of Jeremiah.

In wandering through and around the outskirts of Jerusalem it must have struck many that there is scarcely a foot of the rock that remains in its original formation on the surface. From the Tombs of the Kings, all the way down the valley of the Kedron, along the valley of Hinnom, in truth, all over the ground, everywhere, there is scarce a bit of rock that has not been touched by a tool; many places are so old and worn that it is difficult to say what they were originally; tombs, or excavated caves, have crumbled, and a perpendicular wall is all that is left to tell of the hand of man. Some of these indications may only be the marks of where quarrying had been carried on; tombs were no doubt the most common purpose of those excavations; some may have been temples; steps are very common, but at the present day they lead to nowhere, showing that their original purpose is lost. In one of Capt. Warren's late reports there is some very valuable and curious information which bears on this subject; last year he sunk a series of shafts at the north-east angle of the Haram Area, that is, on the outside of St. Stephen's Gate. These shafts were carried down through the soil to the rock, and he makes the following important statement: "Wherever we have excavated we have found the rock at bottom of our shafts to be cut away in steps, or levelled, *or otherwise showing that the hand of man had been applied to it.*"—*Quarterly Statement V.*, March, 1870.

These shafts were at depths varying from 6ft. to 30, 40, and even to 80ft. The question naturally arises, For what purpose were these cuttings made? Were they quarries, or defences, or were they merely the levelling of the rock for the houses of the Jebusites, or of those who first built the city? This may have been the spot where the people prepared the "great stones, costly stones, and hewed stones, to lay the foundation of the house." According to Josephus, the hill on which Antonia stood was higher than that of Bezetha. It is not so now, hence we must suppose that it was quarried down. In the north-west corner of the Haram Area the surface of the ground is a level rock that was cut down, its former level being visible in the perpendicular scarp in the corner where the Governor's house now stands. Antonia was separated

from Bezetha, "the new city," by a "deep valley which was dug on purpose." This fosse is supposed now to be discovered in a perpendicular cutting in the rock, which may be seen in the church of the Sisters of Sion, where it forms a part of the interior wall near the entrance. Even the surface of the Sacred Rock, under the dome of the rock, has not escaped, and evidences are visible almost all over it that a tool has been used. Some of the cuttings on this stone are so old that they are now almost crumbled away again; it was only while making a careful sketch of it that I became conscious of lines which must have been cut, and which were only to be made out by the continuity of a few detached points. There are a few illustrations of important changes produced by quarrying or cutting away of the original rock upon which Jerusalem stands. Everyone has been interested in learning, through the Explorations of the Fund, of the accumulation of *débris* over almost every part of the surface, but it is equally important to know the changes which have taken place in the form of the rock upon which the whole rests.

NOTES ON OUR LORD'S TOMB.

1. *Nature of the tomb.* All accounts concur in describing it as an excavated sepulchre, a new and recently finished work, and not as yet used for purposes of burial.

The general idea concerning the tomb is that it was single-celled. When constructing it, Joseph could never have had any idea of the sacred use to which it would be applied, and must have had in view a multi-, not uni-locular *family* sepulchre. The narratives uphold the idea of a multi-locular tomb; had it been otherwise, the angel's invitation, "Come, see the place where the Lord lay" (Matt. xxviii. 6), would have been unnecessary, for a glance would have revealed the interior to the two Marys. St. Mark's narrative is more clear; he describes evidently an antechamber, from which the loculi branch off, and in this case there were apparently only two rows, right and left. On entering this chamber, the Marys find the angel "sitting on the right side" (lit.: ἐν τοῖς δεξιοῖς: right what, if not row of loculi?), probably at the entrance of the lately tenanted loculus, which he points out to the affrighted women, "Behold the place where they laid him" (xvi. 6).

According to St. Luke it was only on entering the chamber that the women found not the Lord's body (xxiv. 3); if it had been a one-celled tomb a glance from the entrance would have revealed its emptiness; again, the presence of a loculus branching off from the chamber would necessitate the stooping of Peter to see the grave-clothes laid by themselves (xxiv. 12).

So with St. John—the chamber of the sepulchre admits both Peter

and John (xx. 8), from whence they view the vacant cell and carefully-arranged grave-clothes.

The tomb was closed by a great stone rolled to the entrance. How was this done? Here again the general idea is very vague, and refers to the laborious rolling of a huge spherical mass of rock (for only such could roll) to the door of the tomb, no attention being paid to fact that such a mass could not accurately fit the upright entrance, much less receive the protection seal. How was it then done? The radical verb κυλινδω implies to roll, but not necessarily a spherical object. The Rev. J. L. Porter describes a Jewish tomb which was accurately closed by a millstone-like slab which was rolled down an inclined plane, at the bottom of which was the circular entrance to the sepulchre. Some such arrangement would be necessary to meet the requirements of St. Matthew's narrative, where the angel rolls away, ἀπεκύλισε (not back) the stone and then sits upon it (xxviii. 2).

2. *How was the tomb situated?* According to St. Matthew's narrative, we are, I think, driven to the conclusion that at the scene of the burial there were two hillsides, with a valley between them, for he describes the two Marys as "sitting over against the sepulchre" (ἀπέναντι τοῦ τάφου) xxvii. 61; as if, supposing the tomb had been in the side of Olivet, the Marys had been looking on from the opposite side of the valley, beneath the city walls, but yet in full view, the distance being about 150 yards. If this position be allowed, then in no possible way, at least as far as my reading goes, can the present site of the Holy Sepulchre answer the requirement of St. Matthew's expression, ἀπέναντι τοῦ τάφου.

3. *Where was the tomb situated?* St. John minutely describes the locality: "Now in the place where he was crucified there was a garden (κῆπος, literally an orchard, παραδεισος being garden in our sense of the word); and in the garden a new sepulchre, wherein was never man yet laid. There they laid Jesus" (xix. 41-2).

St. John alone tells us that our Lord's agony also occurred in a garden (κῆπος), xviii. 1, which St. Matthew and St. Mark describe as near a place (χώριον), estate, or hamlet, called Gethsemane (lit. *Gath*, winepress; *shemen*, oil).

Now was the κῆπος of the agony identical with the κῆπος of the burial? If not, why does St. John use the same word to describe two localities?

If they were, then we can understand why our Lord "oft-times resorted" to the κῆπος which witnessed his agony, and was to be the scene of his burial, and in its gloomy shade he trod in solitude the winepress of the wrath of Almighty God.

Gethsemane witnessed the agony and burial; if this is allowed, then it witnessed also the crucifixion, for the κῆπος was *in the place* (ἐν τῷ τόπῳ) where he was crucified.

If my position be at all allowed, then let us inquire—

1. Does the name Gathshemen in any way linger upon the hillside?

2. Are there any stone presses lying about?

3. Can any tomb be identified as facing the city, and clearly visible from its walls, and likely to have been in an orchard?

4. Does the monkish garden of Gethsemane meet our requirements?
5. Does the monkish site of the Holy Sepulchre?

These questions have of course a close bearing upon the site of the crucifixion; the notices of it all convey the idea of an intervening gorge or valley.

The women watched "beholding afar off" (ἀπὸ μακρόθεν), Matt. xxvii. 55. St. Mark describes the centurion in command as standing "over against him" (ἐξ ἐναντίας), xv. 39; and he and St. Luke also describe the women as "watching afar off" (ἀπὸ μακρόθεν).

I should fancy that the site of the crucifixion must be sought along the Bethany road, on the eastern side of the valley of Jehoshaphat.

R. F. H.

POSITIONS OF PLACES EAST OF JORDAN.

The distances are very roughly approximate.

Jebl 'Ajlûn	N.W. of Jerash
Aljabâyyahât	3 miles N. of Aman
Talâât al 'Ali	4 miles N. of Aman
Albett	W. of Aman
Jeb'l Umm 'Aâwyeh	Near Wady Shaïb
Wady al Ârnab	2 miles W. of Aman
Belâd Ajhâr	3 miles W. of Aman
Baïdh Âhmàr	? *a doubtful name*
Wady Deir 'Abar	Ruin W. of Aman (Akbar ?)
Albikreh	4 miles W. of Aman
Almarkab	W. of Aman
Al'âwatyeh	Perhaps Alawâly
Aljahâr	Probably Ajhax
Annawablissîyeh	W. of Aman
Wady Adydzalâmeh	Near head of Wady Seir
Wady al Âshtâ	Called Wady Eshteh on Van de Velde
K. al Alwâlyeh	Probably Alawâly
Tell al 'arŷmeh	At junction of Ashtâ and Bahâr
Arkûb al Khilâl	E. of Wady Shaïb
Wady umm Âdsîs	To Wady Kafreïn
Wady Afdheil	To Wady Hesban
Wady abu 'Aineïn	To Wady Kafreïn
Wady Am'alakah	
Wady 'Abyân	
Wady Kabr Amhamed	
Umm al 'Amad	A mound on Belka Plain
Jabl 'Atrûd	Jebl Atarûs, high point to E. of Dead Sea
Zimlet al 'Alâyâ	On Belka
Al 'Aâl	Eleal (?) N.E. by E. of Hesban
Kabr Abd'allah	Ruin S.W. of Hesban

'Arab almas lâhy	(?)
Rajm Asrâreh	Ruined tower (30ft. square) S.W. of Hesban
K. umm al 'Amed	See Umm al 'Amud
Tell al Arish	Little hill near Hesban
Jabl Ahbas	(?)
Khubet al 'Âl	See Al 'Aâl
K. umm al Abrâk	Pool and ruin E. of Al 'Aâl
K. al 'Awâdy	Remarkable hill N. of al 'Aâl
K. dhahrel Ahmâr	Seen from Alawâly
Alyadûdeh	Ruin S. of K. as Sûk
Wady al 'Amâry	Ruins W. of K. as Sûk
Assawâwîn	S. of Aman
Umm Aswawîyeh	S. of Aman
'Abdûn	W. of Aman
Arâk 'Aisheh	
Zimlel al Âdám	Several miles E. of Aman
Manbûa'a min 'Abhareh	
Umm al Ashrat	Island in Jordan near mouth of Aiya
Wady al Au Aûjâ	W. of Jordan
Wady al Âyrak	Runs into Wady Shaïb
Wady Âádhâm	Near Dead Sea
Tell al 'Aâsy	S. of Jarash and Wady Zarka
Wady al 'Alâfawy	
Merj al 'Ardheh	N. of Jebl Hûsha
Kherbet 'Alân	Ruined village N. of As Salt
Al Âákad	
Dhahret Âshbîl	N. of depressed plain
Âsnâmeh	
Al'amâmeh	
Umm 'Abharah	
Almarsâs	
Birket al Amûd	Ruin and pool N.W. of Aman
Alhamûr	
Aljîáh	W. of depressed plain
Arrahâ	Ruin close to Ain Hemar
Wady 'Ayâfeh	
Arjeim Salîm	Ruin to E. of Máain
Tell al Birkeh	
Wady al Beidhah	
Rajm al Bahâr	
Wady Balâl	Runs into Wady Seir
Jebl umm Balâût	
Wady al Bahâr	One of the large wadies which join E. of Arak el Emîr
Wady Idleik al Bakr	
Jôret al Baidh	
Wady al Bûweib	Runs from Hesban to Wady Hesban
Al Bûwarideh	Runs into Wady Hesban
Khîrbet Balîm	Small ruin S. of Hesban

Al Barâk	
Tell al Binayeh	
Sahîret Bâith	
Khirbet Balâáth	Near Alawâly
Khirbet Benâyeh	Near Alawâly
J. Faghâr al Baïdhâr	
Khirbet Burâzîm	On plain of Belka
Bahâr	
Yaskulû'l Birkeh	
Ghor Basân	The Jordan plain
Talât Batâneh	
Khirbet al Bâshâ	Ruin in depressed plain
Al Bakâá	Depressed plain E. of As Salt
Wady ad Dabâs	Runs into Wady Kafrein (on plan)
Khubet adh Dhaba	1 mile S. of Ain Hemâr
K. Dhâbûk	2 miles S. of Hemâr
Wady adz Dzalâmeh Wady ad Dâlyeh	Joins Wady Seïr, near Ain Seïr
Shajret adh Dharâá	S. of Wady Dâlyeh
Maghâret ad Deir	In Wady Seïr
Khirbet Dubbeh	A large ruin between Wady Seïr and Wady Ashtâ
Dalâl	
Shuweinat ad Dîâb	In Wady Hesban
Al Deir	
Jebl al Dhabâreh	
Dhabbet Mashta	
Ad Dalâleh	
Wady ad Dâris	2 miles S. of As Salt
Ain Katafal Dhuhûr	
Jebl Dzi	N. of Jebl Hûsha
Khirbet Dabîn	Village W. of Jarash
Umm adh Dhabâá	
Wady ad Denanîr	
Khirbet Dajâjeh	
Jebl Faghâr al Baidheh	Not located
Wady al Fâr	
Rajm al Fahûd	
Wady al Fasîl	W. of Jordan
K. al Fawâr	W. of Jarash
Karyet a Fuheïs	
K. al Fahs	
Hesban	Supposed to be Heshbon
Rejim al Ghamâk	W. of Aman
Thogret umm Ghafreh	N. of depressed plain
Wady al Ghazal	S. of Jarash
Jebl Hûshá	N. of As Salt (hill of prophet Hosea)
Umm Hanâbiteh	
Sah'l al Himâ	2 miles W. of Aman
K. al Hawâyeh	2 miles W. of Aman

Wady al Hamâm	W. of Jebl Hûsh
Umm Hálâlâfîyeh	4 miles W. of Aman
Dhahret Hemâr	
Wady Hasâsâ	
Mîrâj al hairân	
Kalál umm abu'l husseïn	A ruin in Wady Hesban on sandstone
Wady abu Husn	Runs into Wady Hesban, near castle o Hussin
Jabl Hawâreh	Hill on Belka
Wady al Habîs	On plain of Belka
Jabl Ahbas	
Rajm al Hawâyeh	
Harbaket aththamâdh	Plain of Belka
Wady al Hadâdeh	
Wady al Hamâm	
Tell al Haddâd	S. of Jarash and Wady Zarka
Karyet Hamtâ	Village S.W. of Jarash
Shajret al Halabâty	
Wady al Hôr	W. of depressed plain
Wady Habathâ	
Tell al Hilâly	Peaked hill N. of Kafreïn
Umm Irkais	Ruin 2 miles S.E. of As Salt
Wady Idleik al Bakr	
Sâátu Izrâbeh	
Wady al Idzâm	
Al Jarânîn	3½ miles N. of Aman
Wady Jahrah	4 miles W. of Aman
Ain Jazîr	½ S. of As Salt
Wady Jarîâh	Runs from near Arak al Emir to Wady Shaïb
Al Juwâyeh	Ruin close to K. as Sûk
Wady al Jahâr	
Jalûl	Long hill with ruins on Belka
Dhahret Jazâ'a	Ruin close to K. as Sûk
Tell al Jalûdy	1 mile E. of Jebl Hûsha
Jazîreh	
Ja'alûd	Minor village 3½ miles N. of J. Hûsha
Jebl umm Jûdeh	3 miles E. of Jebl Hûsha
Wady al Juththeh	Runs into Zarka S. of Jarash
Jarash	Roman ruin
Rajm Jaâsah	Ruin 4 miles W. of Aman
Tell al Kaû	Ruin N. of Aman
Kasâret Thoghrah	
K. al Kasîr	In Belka, W. of Lîza
Kanîset al Khidr	S. of As Salt
Jisr Khaidhâr	3 miles S.E. of As Salt
Jebl Khandak	3 miles S.E. of As Salt
'Arkûb al Khilal	E. of Wady Shaïb, 4 miles above Nimrîn
Nakb al Kadâd	Near Kafreïn
Wady al Kîsîr	

Wady al Kabr	
Tell al Kafrein	On E. of Jordan
K. al Kafir	On Belka, near Neba
K. al Kujîyeh	1 mile from Nebâ
Wady Kar'n Kebsh	Near Nebâ
Dharet	Near Nebâ
Jebl al Kefir	Near Nebâ
K. unim al Khanâfish	W. of K. as Sûk
Umm al Kundub	4 miles E. of Al Âál
Um Kisîr	
Tell Khamâu	On Belka, 4 miles S.E. of K. as Sûk
Sahl umm Kisîr	
Al Kawâssimeh	Mausoleum, 3 miles S. of Aman
Wady al Katar	8 miles S.E. of Aman
K. al Kâf	Remarkable rock-cut tomb, S.E. of Aman 8 miles
Wady al Khirkeh	
Karyet Kitteh	Village W. of Jarash
K. Kajâzeh	8 miles S.W. of Jarash
Karieah	
Khanâzîr	Ruin W. side of depressed plain
Al Kursey	Ruin on edge of plateau, W. of Aman
K. Khaldah	Ruin N.W. of Amân
K. Lisrâ	On Belka, near Niba
K. Lubb	E. of Mâáîn
Wady al Mashâïdeh	Near Kafrcïn
Dhahret al Muktâ	N. of depressed plain
Raj. Omar. abu'l Makhamîr	2 miles W. of Aman
Rajam abu Mâwâidh	W. of Aman
Tell Mîseh	Wady W. of Aman
Wady al Mâyeh	W. of Aman
Maksar	W. of Aman
Karaïáh Mansûrch	Near Wady Ashtâ
Wady al Mahâfeh	Near Arak al Emîr, near into Kafreïn
Wady al Mŷtirdheh	
Rukbet al Malkh	
Khashm al Marâseh	
Wady Mushkâr	Runs into Wady Hesban
K. al Muslûbîyeh	Ruin S. of ruin of Nebâ
Madiyyabeh	Supposed to be Madaba
Tell al Massîây	N. of Máâîn
Zerka Mâáïn	
Al Mûjib	River Arnon
Jabl Mushkâr	Hill near Nebâ
'Ayûn Mûsa	Near Nebâ
K. Masûh	
Jebl Minhâr	Hill and wady S.E. of Al 'Aâ
Wady Manhar	
Khirbet Mâîn	Ruin on Zerka Mâáîn
K. Mâlâkah	

Malâyeh	
Jabl-Umm al Madâris	In Wady Bahâr, N. side.
K. al Marsâs	
Wady al Mashûr	
Sahlet al Mahlâ	Part of the Belka
Dhabbet Mashtâ	
Mâsûh	
Mukabâlîn	Point where the two Zerkas and other wadies commence
Muutâr 'Amân	Ruined mausoleum above Aman to S.
K. al Mirkah	
Rajm al Markab	E. of Aman
K. Mansîyeh	
Al Malfûf	Ruin N.W. of Aman
Wady al Mudahdahreh	
Mâhîs	Fountain S. of As Salt
Tell Dhahret al Maktâl	Ruin N. depressed plain on S.W. of Jarash
K. Mashrarâfeh	N. of Jebl Hûsha
Jebl Meïsareh	N.W. of Jebl Husha
Mûbas	Ruined town N.E. of Al Bakâa
K. al Mastabeh	N. of depressed plain
K. al-Mazâr	2 miles S.E. of Jarash
Al Mijdel	A hill S. of Jarash A hill S.W. of Jarash
Rajm al Maktâh	N. of depressed plain
Al Marsâs	
Al Marâmed	
Múmin	A ruin on the depressed plain
Mushref	
K. Nabâ	Nebâ
Kasar Nawâkîs	N. of Aman
K. Nini	On hill S.E. of Arak al Emîr
An Nawablissiyeh	W. of Aman
Wady an Nahâdy	
Shakret an Najâr	
Wady Nâûr	One of the large wadies which join near Arak al Emîr
Bany N'âim	
Wady an Nûweity	
Wady al Nathûry	Runs into Wady Hesban near Kulat abu in Husseïn
Nukaib ar Raml	
Wady Abu 'Nneml	Near Neba
K. abu Nukleh	A ruin W. of K. as Salt
'Arâk Namam	
Jebl an Nawâsif	
K. an Nûm	
Nakleh	W. of Jarash, runs in Wady Az Zarka
Abu Naseïr	Ruin S.E. of depressed plain
K. Najîb	W. of Jarash

W. O. Weidheh	
Rajm ar Rewâk	4 miles N.N.W. of Aman
Rajm ar Rawâdik	
Wady ar Raml	
Ialaal Rîmeh	
Umm ar Rasâs	Ruin E. of Maáîn
K. Umm Rummâneh	
Umm ar Rummâu	
Jabl ar Rajhâ	
Thoghret umm Ramddân	
Reimûn	Village W. of Jarash
Wady Renîm	
K. Râjib	N.W. of Jarash
Tell ar Rabd	N.W. of Jarash
Wady Umm Rumân	S. of Wady Zarka. N. of depressed plain
Ain Umm Rabia	S.W. of Zark: S. of Jarash
Ash Shamâsâni	Prominent hill N.W. of Aman
Rajm ash Shûk	4 miles N. of Aman
Râs as Sîreh	
Rajm ash Shibhâ	N.W. of Aman
Khirbet Sâr	A ruin on edge of plateau W. of Aman
K. as Sawâfyeh	3 miles W. of Aman
Wady as Seir	Runs by Arak al Emîr
Matal as Sŷreh	In Wady Seîr
K. Sáâdeh	
Karm abu Sheibân	Close to K. Sâr
Kaniset Sârah	
Bir as Sabîl	
Thogret as Sujûr	
Tabaat as Swaimeh	
Binâyet Sakr	Store or granary in W. Hesban
'Aikûb Sahbâ	
Jebl as Sûr	
Wady Saîr	
Kabr Sheikh	
Ain Sûweimeh	N.E. of Dead Sea
Shunet	
As Sâmik	Hill projecting into Belka
Shîhâu	Hill E. of Dead Sea
As Sûwâkah	Hill E. of Dead Sea
Jebl as Sawwâneh	Flinty hill S. of Hesban
Umm as Samâk	Near Alawâly
Marj Setthâ	
As Sâmeh	Same as Samik
K. as Sûk	A large ruined city
As Sakrah	
Safadh	
Suwâdeh	
Yaskub fi Shúâîb	
K. Sâtâ	W. of Jarash

Sâkibeh	
Wady Salâhy	
Merj as Sawâliheh	N. of Jebel Hûsha
Nishet ash Shawâlîyeh	
Wady ash Shaleihy	
Kalat as Salt	City on E. of Jordan
Wady as Sulâîhy	
Bab Safût	Ruin of depressed plain
Tahîn	A hill with artificial top
Kasâret Thogra	4 miles N. of Aman
At Tabakah	W. of Aman ten miles
Abu Târîk	E. of Wady Shaïb
Al Taimeh	
Al Turkmanîyeh	Footprint cut on rock S. of Hesban
K. umm al Tîn	
Harbaket ath Thamâdh	
Thoghret Tasîr Toyret Tusîn	Ruin E. of Takîu
Talât Batânch	
Talûz	Ruin N.W. of depressed plain
Abû Tibneh	Ruin N.W. of depressed plain
Toâmîn	
Tîtî	
Rajm al Wâbidheh	Ruin W. of Aman
Rajm al Wasset	Ruin W. of Aman
Wady 'Ush	
K. 'Urjan	Ruin N. of Aman
Jebl al 'Ushsh	
Jabl al Yadûdîyeh	
Al Yadyîdîyeh	Close to 'Ain Hemar
Ay Labârât	Clump of trees on watershed near Alawâly
Wady az Zarkâ	Great wady, supposed to be Jabbok
Khubet beit Zaràat	Ruin E. of Al 'Aâl
K. Zabûd	Ruin S. of Arak Al Emir
Zizeh	A ruin S. of Aman, on Belka, 2 towers
Tell Jwâyeh Al Jwâyeh	Ruin close to K. as Sûk
K. dubbet al Khamâm	

INSCRIPTION FROM JERASH.

The following inscription was copied by Captain Warren on his visit to Jerash in 1867. Accident led to the discovery that the Rev. R. B. Girdlestone had a copy taken ten years before Captain Warren's visit, and when the stone was in better preservation. He very kindly placed his copy, with conjectural restoration of some parts wanting, in the hands of the Secretary of the Fund.

The inscription was evidently intended for a church door, as a memorial of the change which had taken place since the site had been devoted to this sacred object. Mr. Girdlestone adds in a note on the inscription: "To the Christian antiquarian the inscription is undoubtedly of interest. In the last line but three, part of which has been obliterated, perhaps with a purpose, we find a reference to the Cross, the symbol of the Christian faith. Thus there is the Oriental salutation as a mark of respect to the Saviour, whose work the Cross represents—brought into rude contrast with the holding of the nose to keep out the intolerable odours that had formerly arisen from the same spot when it had been used as a slaughter-house. Again, we have the name of the person through whose pious care the transformation was effected; and lastly, his office is designated, the heathen word Hierophant being transferred, doubtless, to the Christian order of the ministry.

"The whole inscription brings vividly before us the process of transition from heathenism to Christianity, which not only the inhabitants of cities, but also their buildings, had to go through . . . . Shall we be far wrong in setting down the date of this inscription as in the second century after Christ?"

A precisely similar inscription is given in the Count de Vogüé's "Syrie Centrale."

The inscription is a rude imitation of a Homeric hymn—the eleventh line being copied exactly from Homer.

θάμβος ὁμοῦ καὶ θαῦμα παρερχομένοισιν ἐτύχθην.
πάντ' ἀρ' ἀκοσμίης λελυται νέφος · ἀντὶ δε λημῆς
τῆς προτέρης πάντη με θεου χάρις ἀμφιβέβηκεν.
καὶ ποτε τετραπόδων ὀπὸς ἀμογέοντα δαμειῇ,
ἔνθαδε ῥιπτομένων ·—ὁδμὴ διεγειρετο λυγρη,—
πόλλακι καὶ παρίων τις ἐῆς ἐδράξατο ῥῖνος,
καὶ πνοιης πονεησε κακοσμίην ἀλεείνων.
νῦν δε δι' ἀμβροσίοιο πέδου περόωντες ὀδεῖται
δεξιτέρην παλάμην σφετέρῳ προσάγουσι μετώπῳ
σταυροῦ τιμηεντ [ες ὁδον, θεῖ' ἔργ] ατελοῦντες.
ἔιδε θέλεις καὶ τιῦτο δαήμεναι ὄφρα ἐυ ἔιδῃς
Αἰνείας τόδε κἄλλος ἐμοι πόρεν ἀξιεραστον
πανσόφος εὐσεβίην μεμελημένος ἱεροφάντης

NOTE.—The words in brackets in the 10th line are conjectural. There is also some uncertainty about the word λημης in line 2, με θεου in line 3; and in line 9 Captain Warren has μετωπω and Mr. Girdlestone προσωπῳ.

THE ROCK TOMBS OF EL MEDYEH.

A PAPER written by Dr. Sandreczki, which appeared in our *Quarterly Statement* (No. V.) of March 31, 1870, called attention to the Tombs at El Medyeh, as being those raised by Simon Maccabæus for himself and his brethren. Besides arguing with great force on behalf of this site, Dr. Sandreczki described carefully the ruins themselves. Since this was written, excavations have been made by M. Victor Guerin, which have been attended with remarkable results. The honour remains to Dr. Sandreczki of having, at least, pointed the way.

The following account is extracted from the *Globe* of July 20, 1870:—

"M. Victor Guerin, a French *savant*, who has for some years been engaged in antiquarian researches in the East, announces the discovery, at El Medyeh, the supposed site of the ancient Modin, of an edifice which must be identified with the tomb described in the Book of Maccabees, and by Josephus, as having been raised by Simon Maccabæus for himself, his parents, and his four brethren. The ruins stand on an eminence about a mile from El Medyeh, and present the appearance of a building of hewn stone now almost completely overthrown. M. Guerin commenced excavations at either extremity, and on the 27th of last month arrived at a chamber in the eastern end of which the walls were still to a great extent intact. After clearing away the *débris*, he discovered beneath the chamber a sepulchral vault two metres in length and one in width, and 70 centimetres deep. It was paved with mosaic work of red, black, and white stone, and was surrounded by a ledge which formerly supported the slabs which served at once for the flooring of the chamber and for the roof of the vault. Ten metres to the west of this a second chamber was discovered in a less perfect condition, and the remains of five others, with their respective vaults, could be distinctly traced. Each chamber we know was surmounted by a pyramid, and the place where these pyramids had been fitted into the rest of the building was still visible. The whole edifice measures 28 metres in length and 6½ metres in width. It was surrounded by a portico resembling the peristyle of a Greek temple. The shaft of ten of the columns, which had formed the portico, each shaft 47 centimetres in diameter, were found among the ruins. This discovery removes all doubt as to the identity of the Medyeh with the ancient home of the family of the Maccabees."

LIST OF SUBSCRIPTIONS.

JUNE 30TH TO SEPTEMBER 30TH.

a denotes Annual Subscriber.

*** If any omission or mistake be observed in the following lists, the Secretary will be very glad to be informed of it, and will rectify the error in the next *Quarterly Statement*.

	£	*s.*	*d.*
Per Rev. T. M. Gorman—			
Robert Hampton, Esq.	5	0	0
William Banting, Esq.	2	2	0
John Sperling, Esq.	2	2	0
*a*J. J. Merriman, Esq.	1	1	0
*a*Rev. T. M. Gorman	2	2	0
*a*Rev. J. M. Lee	1	1	0
*a*J. S. Wright, Esq.	1	1	0
*a*J. Robison Wright, Esq.	5	0	0
Mrs. Charles Wright	1	0	0
*a*John Aird, Esq.	1	0	0
"Collected by E."	0	9	0
Mr. Blunden	0	17	0
*a*C. F. Fellows, Esq.	5	0	0
*a*W. Robinson, Esq.	1	1	0
*a*W. Robinson, Esq., jun.	1	1	0
*a*Rev. John Robinson	1	1	0
S. Engler, Esq.	0	2	6
Mrs. Sophia Trigg	0	2	6
*a*Rev. A. A. Isaacs	0	10	0
*a*Mrs. Leveson Hamilton	1	1	0
Lord Ebury	2	0	0
*a*Rev. A. Jessop	1	1	0
*a*General Stanhope	1	1	0
*a*Rev. A. E. Northey	1	1	0
*a*R. Clayton Browne, Esq.	1	1	0
R. J. Snape, Esq.	1	1	0
*a*Sir George Harvey	1	1	0
*a*Rev. Charles Penny	0	10	0
*a*Arthur Barry, Esq.	1	1	0
*a*Miss Clayton	0	5	0
*a*Rev. G. Straton	1	0	0
A Friend	2	0	0
*a*Josiah Evans, Esq.	2	0	0
*a*Ven. Archdeacon Boutflower	2	2	0
*a*H. S. Perry, Esq.	1	0	0
*a*Dr. Rogers	1	0	0
*a*Rev. C. G. Chittenden	1	1	0
*a*Miss Warren	1	0	0
*a*Arthur Sperling, Esq.	1	1	0
Rev. H. Denne Hilton	1	0	0
Professor Rolleston (3rd Don.)	1	1	0
*a*Rev. James Bagge	1	0	0
Rev. Daniel Kerr, proceeds of Lectures	18	5	0
*a*Mrs. Tudor La Vie	1	1	0
Rev. J. E. Kittridge	1	10	0
*a*Rev. Canon Gover	1	1	0
Do., Geological Survey	0	10	6
Lord Mark Kerr (2nd Don.)	3	0	0
*a*Rev. J. Stewart Wilson	1	0	0
Miss Yates	2	0	0
Rev. G. Scott (5*s. a.*)	0	10	0
Charles Barry, Esq.	2	2	0
Per Miss A. Widdows	0	13	0
*a*Rev. Miles Greenwood	1	1	0
Rev. E. L. Clark	0	10	0
*a*Major-General MacQueen	2	2	0
J. Peacock, Esq.	2	2	0
*a*C. R. Cope, Esq.	1	1	0
*a*Rev. H. B. Swete	1	1	0
*a*Mrs. Bidder	1	1	0
*a*Rev. W. Willson	0	5	0
*a*Rev. W. H. Lance	1	1	0
*a*A. H. Lees, Esq.	1	1	0
Ladies' Working Party at St. Dunstan's-in-the-West	1	0	0
*a*Mrs. Norris	2	2	0
*a*Rev. Henry Mayers	0	10	6
*a*Mrs. Bonham-Carter	1	1	0
Per Miss Moses	1	1	0
D. Brandon, Esq.	2	2	0
*a*John Hales, Esq.	1	1	0
*a*Mrs. Hales	1	1	0
Collection at Hare Court Chapel, Canonbury	17	10	6
*a*Major-General Clarke	0	10	0
Miss M. Keep	0	10	0
*a*Rev. C. Spencer Stanhope	1	1	0
*a*Mrs. C. A. Brook	1	1	0
*a*Rev. J. Ingham Brooke	1	1	0
J. Cornish, Esq.	5	5	0
Edward Pedder, Esq.	5	5	0
Wellington College	5	1	6

	£	s.	d.
G. Harris, Esq. ..	1	1	0
Miss Frances Hicks	2	0	0
C. C. Clifford, Esq.	1	0	0
Per Rev. W. Lees, Lytham, collected by Mrs. Lees and Miss Threlfall—			
Miss Cunningham	0	5	0
T. C. Hinckman, Esq.	1	0	0
Mr. Lambert	0	5	0
Miss Marriott	0	1	0
Mr. Threlfall	0	10	0
Mrs. Threlfall	0	5	0
M. J.	0	5	0
*a*Rev. Henry Galbraith	1	0	0
Thos. Greenhalgh, Esq., (£1 1s. *a*)	2	2	0
*a*Rev. D. G. Watt	1	0	0
Rev. G. R. Green (£1 1s. *a*)	2	2	0
F. Skipwith, Esq.	1	10	0
*a*Rev. J. A. Bastow	0	10	6
*a*Charles Bond, Esq.	1	1	0
*a*Rev. J. J. Bonar	1	0	0
*a*Rev. H. L. Hubbell	0	10	0
*a*W. H. Hayden, Esq.	1	0	0
*a*Jasper Bolton, Esq.	1	1	0
Per H. G. Heald, Esq.	5	16	0
From lists of Rev. G. St. Clair—			
*a*H. Brown, Esq.	0	10	0
*a*John Robertson, Esq.	1	1	0
*a*Rev. Walter Peppercorn	0	10	6
*a*Mrs. Stenight	0	5	0
*a*Miss Burrell	0	5	0
*a*Mr. Stenight	0	2	6
*a*Messrs. Balfern Brothers	1	1	0
*a*T. Plowman, Esq., jun.	0	10	0
*a*Rev. S. H. Booth	1	1	0
*a*John Stoneman, Esq.	0	10	6
*a*George Thomas, Esq.	0	10	6
*a*William Piper, Esq.	1	1	0
*a*G. L. Bristow, Esq.	1	1	0
*a*John Carr, Esq.	1	1	0
*a*G. F. White, Esq.	1	1	0
*a*Joseph Ruston, Esq.	1	1	0
*a*Mrs. Wells	0	10	0
*a*Captain Perceval	1	1	0
*a*Edward F. Sewell, Esq.	0	10	6
*a*Rev. James Dingle	0	10	6
Mrs. Brown	0	10	0
*a*Rev. W. Jackson	0	5	0

LOCAL ASSOCIATIONS.

BIRMINGHAM.

Hon. Sec.—Rev. Charles Evans.

*a*Lord Lyttelton	2	2	0
*a*J. S. Wright, Esq.	1	1	0

CLAPHAM.

Hon. Sec.—Rev. R. B. Girdlestone.

Per Rev. R. B. Girdlestone—			
W.	5	0	0
Anon.	2	2	0
*a*Rev. R. B. Girdlestone	0	10	6

CARDIFF.

Hon. Sec.—J. C. Oliver, Esq.

*a*J. B. Schand. Esq.	0	10	6
Do., Donation	0	10	0
a— Elliott, Esq.	0	10	6
*a*Rev. J. Waite	0	5	0
*a*Mr. Jones	0	10	6
Miss Kate Alexander, per	1	1	0

DAWLISH.

Hon. Sec.—Rev. Orlando Manley.

Miss Garratts	1	1	0
Mr. German	1	1	0
Per Miss Gamlen	1	4	0

EXETER.

Hon. Sec.—Rev. T. P. Acland.

*a*Dr. Rogers	1	0	0

KETTERING.

Hon. Sec.—Rev. Theodore M. Owen.

*a*Rev. J. L. Sutton	1	1	0
*a*Lady Robinson	1	1	0
*a*Mr. W. Dash	0	10	6
*a*Mr. Owen Goosey	1	1	0

NEWCASTLE-ON-TYNE.

Hon. Sec.—T. Hodgkin, Esq.

T. Johnson, Esq.	0	10	0
Rev. D. C. Douglas	0	10	0
T. L. Gooch, Esq.	5	0	0
Per Rev. C. O. Hassell	2	0	6
*a*T. Hodgkin, Esq.	1	1	0

OLNEY.

Hon. Treasurer.—W. Hipwell, Esq.

Per W. Hipwell, Esq.	4	0	0

PLYMOUTH.

Hon. Sec.—John Shelly, Esq.

*a*J. B. Rowe, Esq.	0	10	0
*a*John Shelly, Esq.	1	0	0

	£	s.	d.
TORQUAY.			
Hon Sec.—Rev. J. Priestley Foster.			
Collected on April 5 at Bath Saloon	29	5	5
Collection at Ellacombe	3	6	3
Donation—			
Mrs. Filder	0	12	0
Subscriptions—			
Lord Talbot de Malahide	1	1	0
Archdeacon Huxtable (for 5 years)	2	0	0
The Misses Attye	1	1	0
Mr. Burdon	1	1	0
Dr. Evanson	1	1	0
Rev. J. P. Foster	1	1	0
Mr. Haliburton	1	1	0
Mrs. Lomax	1	0	0
Rev. R. Lovett	1	1	0
Miss Mitchell	0	10	0
Rev. G. E. Phillips	1	1	0
Rev. F. A. Savile	1	1	0
Rev. M. S. Wall	1	1	0
TUNBRIDGE WELLS.			
Hon. Sec.—			
*a*W. F. Browell, Esq.	0	10	0
*a*W. B. Maingay, Esq.	1	1	0
*a*R. Janson, Esq.	1	1	0
*a*R. Webb, Esq.	1	1	0
*a*Rev. C. B. Bowles	0	10	0
YARMOUTH.			
Hon. Sec.—Rev. H. R. Nevill.			
Per Miss Haddon	1	0	0
*a*Rev. H. R. Nevill	1	1	0
*a*S. W. Spelman, Esq.	1	1	0
*a*J. W. Shelly, Esq.	1	1	0

ERRATA.

For *W. F.* Hutchinson, Esq., M.D., read R. F. Hutchinson, Esq., M.D.

For Mrs. Killick 1 0 0
Collected by Miss Killick 0 9 0

Read Collected by Miss Killick 1 10 0
*a*Mr. Killick 1 0 0

For A. W. Harm, read A. W. *Hume.*

For Rev. A. M. Rendell, read Rev. A. M. Rendall.

The Rev. F. Baldey should be entered as an annual Subscriber.

LIST OF LECTURES.

		£	s.	d.
April 26. Hounslow.	Rev. G. St. Clair—			
	Collected	4	1	0
	(Omitted in last Quarterly.)			
Rev. Daniel Kerr—				
July 18. Cupar.	*Chairman*—Provost Hood.			
	Collection	2	7	2
	Sale of Photographs	1	15	6
	Provost Hood	0	17	0
	Alex. Lawson, Esq., of Beventurk	10	0	0
	Rev. Henry Renton, Kelso	1	1	0
Rev. Henry Geary—				
Sept. 2. Cardiff.	*Chairman*—The Marquis of Bute.			
	Collected	14	4	8

PUBLICATIONS OF THE SOCIETY.

1. Report of Preliminary Meeting, 1865.
2. Captain Wilson's Expedition, 1866.
3. Meeting at Cambridge, 1867.
4. Annual Meeting, with Lieut. Warren's Report, 1868.
5. Statement of Progress, January 1st, 1869.
6. Lieut. Warren's Letters and Reports, with lithographed plans.
7. Lieut. Warren's Notes on the Valley of the Jordan and Excavations at Ain es Sultan (Jericho).
8. Dean Stanley's Sermon on the Exploration of Palestine. Price 6d.
9. Quarterly Statement. No. I. April 1st, 1869.
10. Quarterly Statement. No. II. June 24th, 1869.
11. Quarterly Statement. No. III. September 30th, 1869.
12. Quarterly Statement. No. IV. January 1st, 1870.
13. Quarterly Statement. No. V. April 1, 1870.
    Contents: Statement of Progress—The Moabite Stone, with an Illustration—The Temples of Cœle-Syria, with two Illustrations, by Captain Warren—The Summit of Hermon, with an Illustration, by Captain Warren—Our Summer in Lebanon, with an Itinerary, by Captain Warren—The Rock Tombs of El Medyeh, by Dr. Sandreczky—The Stone of Zoheleth, by M. Clermont-Ganneau—Letters from Mr. E. H. Palmer, Nos. I. and II.—Arabic Glossary—Captain Warren's continued Letters.
14. Quarterly Statement. No. VI. June 30, 1870.
    Contents: Statement of Progress—The Original Discovery of the Moabite Stone—The Expedition to East of Jordan, by Captain Warren—Heights of Places to East of Jordan, by Captain Warren—Letters from Mr. E.

H. Palmer, Nos. III. and IV.—Inscriptions and Masons' Marks, by Captain Warren—Note on the Pool of Bethesda—List of Weights, &c., by Captain Warren—Report of Annual Meeting of May 16th—Captain Warren's continued Letters, No. 47.

15. Quarterly Statement. No. VII. September 30, 1870.

Contents: Statement of Progress—The Haram Area, with Plan—Discovery at Jerusalem, by Captain Warren—Discovery of Phœnician Inscription on Jar Handles—The Royal Quarries, with an Illustration, by W. Simpson, F.R.G.S.—Notes on our Lord's Tomb—Positions of Places East of Jordan, by Captain Warren—Inscription from Jerash—The Rock Tombs of El Medyeh.

LOCAL ASSOCIATIONS.

ALDERSHOT: *Hon. Sec.*—Rev. J. E. Sabin.
ALEXANDRIA—DUMBARTON: *Hon. Sec.*—Rev. D. Wright.
ALNWICK: *Hon. Sec.*—Edward Allen, Esq.
ASHFORD: *Hon. Sec.*—F. A. Dewé, Esq.
BASINGSTOKE: *Hon. Sec.*—Rev. W. Marriner.
BATH: *Hon. Sec.*—Rev. T. P. Methuen.
BEDFORD: *Hon. Sec.*—E. W. Ransom, Esq.
BIRKENHEAD: *Hon. Sec.*—Ed. Rae, Esq.
BIRMINGHAM: *Hon. Sec.*—Rev. Charles Evans.
BRADFORD: *Hon. Sec.*—Rev. W. Dyson.
BRIGHTON: *Hon. Sec.*—Rev. D. Winham.
BROADSTAIRS: *Hon. Sec.*—Rev. J. H. Carr.
BURNLEY: *Hon. Sec.*—Rev. H. Stamer.
BURY: *Hon. Sec.*—Rev. J. Hornby.
CALLINGTON: *Hon. Sec.*—Rev. F. V. Thornton.
CAMBRIDGE: *Hon. Sec.*—Rev. T. G. Bonney, Tutor of St. John's College.
CARDIFF: *Hon. Sec.*—J. C. Oliver, Esq.
CHELTENHAM: *Hon. Sec.*—Dr. E. Wilson.
CHESTER: *Hon. Sec.*—The Very Rev. the Dean of Chester.
CHICAGO, U.S.A.: *Hon. Sec.*—Rev. Dr. Patton.
CHIGWELL: *Hon. Sec.*—Rev. H. M. Robinson.
CLAPHAM: *Hon. Sec.*—Rev. R. B. Girdlestone, St. James's, Clapham Park Road, S.W.
CLIFTON and BRISTOL: *Hon. Sec.*—Rev. C. H. Wallace.
CROYDON: *Hon. Sec.*—Mr. Warren.
DALKEITH: *Hon. Sec.*—W. Bryce, Esq., M.D.
DARLINGTON: *Hon. Sec.*—
DEVIZES: *Hon. Sec.*—Rev. W. P. S. Bingham.
DEVONPORT: *Hon. Secs.*—Rev. H. Everett, J. Venning, Esq.
DORCHESTER: *Hon. Sec.*—Rev. Handley Moule.
DOVER: *Hon. Sec.*—Mr. W. P. Mummery.
DUNDEE: *Hon. Sec.*—R. Mackenzie, Esq.
DURHAM: *Hon. Sec.*—Rev. J. Dodd.

EASTBOURNE: *Hon. Sec.*—Rev. H. R. Whelpton.
EDINBURGH: *Hon. Secs.*—Rev. W. Lindsay Alexander, D.D., and A. Keith Johnston, Esq., LL.D.
ESHER: *Hon. Sec.*—R. Few, Esq., Wolsey Grange.
EXETER: *Hon. Sec.*—Rev. Prebendary Acland.
FALMOUTH, for the County of Cornwall: *Hon. Secs.*—A. Lloyd Fox, and W. P. Dymond, Esq.
FARNHAM: *Hon. Sec.*—Rev. E. Utterton.
FAVERSHAM: *Hon. Sec.*—
FROME: *Hon. Sec.*—Rev. T. G. Rooke.
FOLKESTONE: *Hon. Sec.*—Rev. J. W. Watson.
GLASGOW: *Hon. Sec.*—A. B. M'Grigor, Esq.
GLOUCESTER: *Hon. Secs.*—Rev. J. Bowman and F. Cooke, Esq.
GREENOCK: *Hon. Sec.*—D. MacDonald, Esq.
GUILDFORD: *Hon. Sec.*—Col. Thurburn.
HALIFAX: *Hon. Sec.*—Rev. Dr. Hall.
HAVANT: *Hon. Sec.*—Rev. F. P. Seymour.
HERTFORD: *Hon. Sec.*—Rev. T. Lingley.
HUNTINGDON: Rev. Gerald Vesey.
JEDBURGH: *Hon. Sec.*—G. Fyfe, Esq.
KETTERING: *Hon. Sec.*—Rev. Theodore M. Owen.
LEEDS: *Hon. Sec.*—Edward Atkinson, Esq.
LEWES: *Hon. Sec.*—Rev. R. Straffen.
LISKEARD: *Hon. Treas.*—John Eliot, Esq. *Hon. Sec.*—Rev. Dr. Ritchie.
LIVERPOOL: *Hon. Sec.*—Rev. C. D. Ginsburg.
MALVERN: *Hon. Sec.*—Rev. D. F. A. Grahame.
MANCHESTER: *Hon. Sec.*—Rev. W. Crane.
MANSFIELD: *Hon. Sec.*—T. W. Clarke, Esq.
MARGATE: *Hon. Sec.*—Rev. G. Collis.
MIDDLESBOROUGH: *Hon. Sec.*—Rev. Vyvyan H. Moyle.
NEWARK: *Hon. Sec.*—Evelyn Falkner, Esq.
NEWARK: Ladies' Committee. *Hon. Treas.* Mrs. Tallents. *Hon. Sec.*—Mrs. G. Hodgkinson.
NEWBURY: *Hon. Sec. pro tem.*—Rev. J. L. Randal.
NEWCASTLE: *Hon. Sec.*—Thomas Hodgkin, Esq.
NOTTINGHAM: *Hon. Sec. pro tem.*—Rev. F. Morse.
OLNEY and NEWPORT PAGNELL: *Hon. Sec.*—Rev. J. P. Langley.
OXFORD: *Hon. Secs.*—Rev. Professor Rawlinson and Rev. Edwin Hatch.
PERTH: *Hon. Sec.*—R. Jameson, Esq.
PLYMOUTH: *Hon. Secs.*—J. B. Rowe, Esq., and J. Shelley, Esq.
PORTSMOUTH: *Hon. Sec.*—Rev. N. R. Devereux.
RAMSGATE: *Hon. Sec.*—Mr. Wilson, High Street.
REIGATE and REDHILL: *Hon. Sec.*—W. Wilson Saunders, Esq.
RICHMOND: *Hon. Sec.*—R. R. Alexander, Esq.
RYDE: *Hon. Sec.*—Rev. J. Le Mesurier (Bembridge).
SCARBOROUGH: *Hon. Sec. pro tem.*—Rev. B. Evans, D.D.
SHERBORNE: *Hon. Sec.*—J. Farmer, Esq.
SOWERBY: *Hon. Sec.*—Rev. A. L. W. Bean.
ST. ALBANS: *Hon. Sec.*—Rev. W. J. Lawrance.
ST. ANDREW'S: *Hon. Secs.*—Dr. Lees and Dr. Mitchell.
ST. GERMANS: *Hon. Sec.*—R. Kerswill, Esq.

ST. LEONARDS:—Mrs. Alexander, Brunswick House, Marina, has kindly consented to receive subscriptions.
STIRLING: *Hon. Sec.*—Rev. W. Taylor.
STREATHAM: *Hon. Sec.*—Rev. W. Raven.
TAUNTON: *Hon. Sec.*—Rev. D. Alford.
TAVISTOCK: *Hon. Sec.*—Mr. Frederick Clarke.
TORQUAY: *Hon. Sec.*—Rev. J. Priestley Foster.
TIVERTON: *Hon. Sec.*—Major Stehelin.
TUNBRIDGE: *Hon. Sec.*—Rev. J. W. Bromley.
TUNBRIDGE WELLS: *Hon. Sec.*—
UXBRIDGE: *Hon. Sec.*—J. Hunt, Esq., F.R.G.S.
VENTNOR: *Hon. Sec.*—Rev. A. L. B. Peile.
WARMINSTER: *Hon. Sec.*—J. Morgan, Esq.
WELLS: *Hon. Sec.*—Rev. G. Fagan.
WESTON-SUPER-MARE: *Hon. Secs.*—Capt. T. Townsend, R.E., and J. Titley, Esq.
WIMBLEDON: *Hon. Sec.*—Rev. T. Whitehead.
WORCESTER: *Hon. Sec.*—Rev. Francis J. Eld.

DATE DUE

Temporarily circulated from
Pacific School of Religion

GAYLORD

PRINTED IN U.S.A.

Palestine exploration
quarterly
1869-
70
CBPac

1869-
70

10349

GRADUATE THEOLOGICAL UNION LIBRARY
BERKELEY, CA 94709

GTU Library
3 2400 00334 4847